University of Nebraska Medical Center

2019 DEPARTMENT OF INTERNAL MEDICINE

WE ARE
NEBRASKA MEDICINE & UNMC

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

UNMC Nebraska Medicine

FROM THE CHAIRMAN

DEBRA J. ROMBERGER, M.D.

We were about to finish this report when the world started to change dramatically with COVID-19. We are proud of our infectious disease team for not only what they did at the beginning of the pandemic, but for all they continue to do in guiding our institution, community, and the country in strategies to cope with this infection. We know there are many parts of the U.S. and the world who have experienced more devastation than we have to date in Nebraska, and we seek to support them in any way possible.

While the COVID-19 pandemic will shape how we practice medicine for many more months and possibly years, the UNMC Department of Internal Medicine remains enthusiastic about the programs highlighted in this report and is committed to adapting these programs to the future. We will continue to emphasize an age-friendly environment through the Geriatrics Workforce Enhancement Project from the HRSA program. The expansion of CAR-T cell therapy to more patients with various malignancies will offer hope to many in our region. Our point-of-care ultrasound program is focused on educating our trainees in a comprehensive fashion to utilize this technology to enhance the care of their patients. Importantly, we strive to provide clinical care, perform research, and train our students, residents, and fellows in an environment that promotes wellness and is infused with strategic mentoring at all levels.

The challenge with creating reports like this is that things change as soon as one has put together a document! The accomplishments of 10 divisions are reflected in the pages that follow, but as of January 1, 2020, we welcomed Dr. Jill Poole as the inaugural division chief of a new UNMC Allergy and Immunology Division. They are off to a great start! We also have welcomed a new chief of gastroenterology and hepatology, Dr. Peter Mannon, who is launching our new Paustian Inflammatory Bowel Disease Center.

While the COVID-19 pandemic has made the future seem uncertain in many ways, I am quite certain about the talents of the clinicians, educators, researchers, and staff in our department and in their ability to shape a future that is good for our patients, our community, and our world. We are proud to call the heartland of America our home and will continue our mission to lead the world in transforming lives to create a healthy future for all individuals and communities. We are excited for the decade we started in 2020!

TABLE OF
CONTENTS

FEATURES

DIVISIONS

PLUS

CLINICAL FEATURE

PATIENTS, HEALTH SYSTEMS BENEFIT FROM AGE-FRIENDLY MOVEMENT

The population is aging, and older adults constitute a high and increasing proportion of all inpatient and outpatient services.

Geriatric care has matured, and research has produced a set of evidence-based practices in the care of older adults that needs to be shared across all health professions and all venues of the health care system. This is called the Age-Friendly Movement.

Most care for older adults occurs in primary care. However, most of those providers received little training in geriatric medicine.

"The care of the older adult is complex but rewarding, and professionals in practice are keen on learning how to improve their care for older adults," said Jane Potter, M.D., professor in the UNMC Division of Geriatrics, Gerontology and Palliative Medicine.

Thanks to a five-year, $3.7 million Geriatrics Workforce Enhancement Project grant from the U.S. Health Resources and Services Administration (HRSA), UNMC is uniquely poised to address this problem.

HRSA estimates a need for 33,200 geriatricians in the U.S. by 2025, but current projections estimate the supply at 6,230, a deficit of about 27,000. The purpose of the grant is not to make all primary care providers into geriatricians. They simply do not have the time. Many see pediatric and young adult populations, where they also need to maintain their skills.

Spearheaded by Dr. Potter, the grant is designed to improve the health and health outcomes of older adults in Nebraska by educating teams of health providers in primary care settings to benefit patients, their families and caregivers.

"This grant will help integrate approaches to the special care needs of older patients," Dr. Potter said.

The training is derived from a set of evidence-based practices identified by The John A. Hartford Foundation (JAHF) in collaboration with the Institute for Health Improvement (IHI) and adopted by HRSA for this grant program. These practices are the basis of the Age-Friendly Movement and are being adopted by entire health systems across the U.S., Dr. Potter said.

Those evidence-based practices in the Age-Friendly Movement are known as the 4M's:

+ What Matters to the patient: know and align care with specific outcomes and goals to reduce inpatient utilization (54%) and intensive care unit stays (80%);
+ Mobility, which focuses on maintaining the ability to walk safely: patients who receive care to improve mobility experience a 30% reduction in hospital costs;
+ Medications, which are a double-edged sword for older adults, can help extend life but also pose potential harms including adverse events: reducing adverse drug events in 1,500 hospitals across 38 states reduced costs by $78 million; and
+ Mentation: prevent, delay and manage dementia, delirium, depression. Depression doubles the cost of care in ambulatory care settings.

The grant will provide education to teams in primary care who are using a medical home (PCMH) model. PCMHs use a team of health care providers — including physicians, nurses, nurse practitioners, physician assistants, mental health professionals, pharmacists and social workers — to care for patients as a team. Clinics are encouraged to use the Medicare Annual Wellness Visit as a means of screening for and beginning to address the 4Ms.

In the end, this project is all about creating 'Age-Friendly' health care for the benefit of our patients, the health system and ourselves, both professional and personally.

Jane Potter, M.D.

A key modality for training engages clinic teams in a tele-mentoring program that allows clinic staff to present challenging cases to geriatric experts over video and audio links. The experts provide short didactic training and case discussions, and recommend tools to assist the clinics when they see similar problems in the future. Whenever possible, tools are integrated with the health system's electronic medical records.

The grant also:

+ Provides education and support for caregivers of persons with dementia;
+ Addresses the social determinants of health; and
+ Educates patients who are beginning to use opioids on the risks, benefits and alternatives of these medications and develops patient education materials specific to older adults.

Al Fisher, M.D, Ph.D., chief of the UNMC Department of Internal Medicine's Division of Geriatrics, Gerontology and Palliative Medicine, said the grant award reflects Dr. Potter's expertise.

"There are a limited number of these programs nationally to compete for, and we are the only one in Nebraska," Dr. Fisher said. "This is a HRSA program designed to increase the use of geriatrics principles in several partner community clinics along with the Nebraska Medicine primary care practices."

The grant forms a five-year partnership between UNMC, primary care practices in Omaha and 13 rural counties, Eastern Nebraska Office on Aging (ENOA) and the Alzheimer's Association Nebraska Chapter.

UNMC partners include: the UNMC Colleges of Medicine, Public Health, Nursing and Pharmacy; OneWorld, Nebraska Medicine and Ponca Health.

Grant objectives include:

+ Partnering with at least 10 primary care clinics to create "age-friendly" primary care practices (clinics that address the four M's);
+ A partnership with the Alzheimer's Association Nebraska Chapter to provide caregiver education and support through the primary care clinics and all 14 patient-centered medical home clinics at Nebraska Medicine;
+ A partnership with the ENOA to address the social determinants of health for patients in the practices and provide more education about and access to, community-based resources; and
+ Using state law mandating patient education on the benefits, risks and alternatives to opioid prescriptions to reduce the number of patients transitioning to the chronic use of opioids.

Said Dr. Potter: "In the end, this project is all about creating 'Age-Friendly' health care for the benefit of our patients, the health system and ourselves, both professionally and personally."

RESEARCH FEATURE

THE EVOLVING WORLD OF CANCER TREATMENTS

Cancer is an insidious and tricky disease.

Just when you think you've got it licked, it comes back.

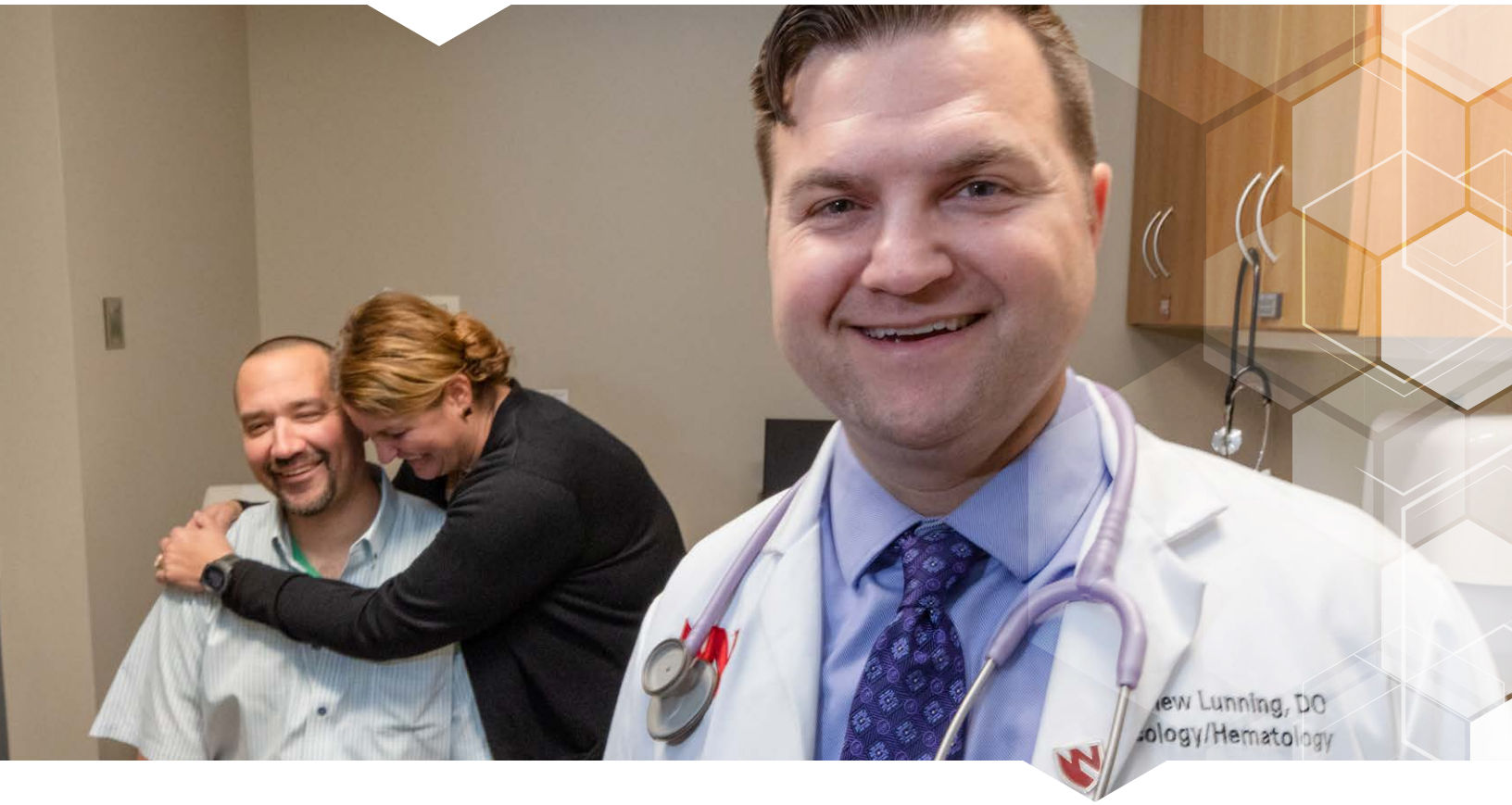
For decades in the fight against blood cancers, chemotherapy and radiation were standard pillars of cancer treatments. Then came stem cell transplantation.

Treatments had to evolve to keep up with the pesky cancer cells that would hide and somehow protect themselves from ever more powerful drugs.

Even the newest of treatments for non-Hodgkin lymphoma (NHL) and leukemia, the fifth most common type of cancer in U.S. adults, is undergoing metamorphosis.

Two chimeric antigen receptor (CAR) T-cell therapies were approved by the Food and Drug Administration (FDA) and became available for commercial use in 2017. Nebraska Medicine was one of the first hospitals in the Midwest – and the only one in Nebraska – to offer the CAR-T cell breakthrough clinical trials and now, the approved treatment.

CAR T-cells are the equivalent of giving patients a living drug. It's a way of taking the patient's own T-cells outside the body, genetically engineering them to produce receptors on their surface called chimeric antigen receptors, or CARs, then reinfusing the cells to fight the cancer.



Our T-cells are probably the best defense against developing cancer, and when our immune system fails to eradicate the cancer, it is only a matter of time before symptoms manifest," said Matthew Lunning, D.O., associate professor, oncology/hematology, and medical director, clinical research center.

"With CAR-T therapy, you take out the T-Cells, reengineer them outside the body, and make it more specific to what it's attacking."

At first, it was hailed as the last-resort therapy. But now, with growing familiarity with the treatment and a longer record of effectiveness, some patients are receiving it earlier.

That's not what happened with Colin Witt, a 45-year-old district associate juvenile court judge from Polk County, Des Moines, Iowa. He had completed six cycles of chemotherapy and survived placement of bilateral nephrostomy tubes and an appendicitis attack before he was referred to Nebraska Medicine for advanced treatment. CAR T-cell therapy was recommended.

"I had never heard of it and didn't know what it was," Witt said. When he looked at his wife, Jen, her face was white. "It made her nervous."

As a cancer nurse, Jen believed those first six cycles of chemo were what worked for people. "I always thought CAR T-cell was there for other people. We'll never need it. I had to wrap my head around the fact that we're at the point where all other treatments had failed, and it's a last chance."

From start to finish, the manufacturing process is about three weeks. During the first phase, the patient's T-cells are collected during an outpatient procedure at the hospital. The cells are then sent to a lab in California for processing. In the meantime, the patient may receive bridging therapy and eventually several days of priming chemotherapy.

When the cells return to Omaha, they're received into a specialized processing center at Nebraska Medicine to complete the procedure. The patient then has their own modified T-cells given back to them. A specialized team monitors the patient at the hospital for the next seven to 14 days, including frequent blood tests and exams.

Witt had a team of about 20 health professionals to guide him through treatment – from nurse case managers to the biologic processing facility and apheresis teams, to the nurses trained to infuse the altered cells and treat toxicity.

"It takes a team," Dr. Lunning said. "The complexity to get one CAR T-cell done in one patient is incredible."

He credits the leadership in UNMC's Department of Internal Medicine and Nebraska Medicine for their commitment to the clinical studies and for dedicating resources to conduct the trials and train all of the necessary health professionals on the new procedures.

"It's only because we did the clinical trials that now we're doing as much approved treatment with as much confidence," Dr. Lunning said.

Clinical trials and the commercial application show that CAR T-cell therapy works for 40% of patients who remain cancer free of

Cancer requires self-focus, Witt said. It's not enjoyable, but there's a good aspect to it because you must rest and be quiet. There is a peace in that. You can't focus on the needs of others as you want. That period made me stronger. It has helped me appreciate the opportunity to be a better helper and listener.

Colin Witt

high-grade B-cell lymphoma after two years. Meanwhile, 60% appear to eventually relapse or have a disease that does not respond to CAR-T.

Unfortunately, Witt fell into the latter group. He is now facing further therapy and potentially an allogeneic transplant. In an allogeneic transplant, stem cells are collected from a matching donor and transplanted into the patient to suppress the disease and restore the patient's immune system.

Physician-scientists continue to evolve the CAR-T cell treatment.

"While we have had successes, we cannot forget about those who the currently available CAR T-cell therapy did not work for," he said. "We must be thinking, do we try to improve CAR T-cell itself or try to make the tumor more accepting to destruction by the currently available CAR T-cells? That's the next frontier," Dr. Lunning said.

"There's a lot of interest in CAR T-cell therapies for blood cancers, but also for solid tumors. We have to find the right targets on tumors and ensure that that same target is not expressed on cells of significance so the therapy doesn't do harm."

Eleven multi-institutional clinical studies at UNMC and Nebraska Medicine are now underway with several industry partners. There is interest Dr. Lunning said, in new targets in other blood cancers, and combining CAR T-cell therapy with certain anti-cancer therapies. Other studies focus on the early use of CAR T-cell after the first line of standard care has failed and comparing it to second line therapy plus transplantation, the current standard of care.

Patients enrolled in these trials are adults who have aggressive forms of lymphoma, chronic lymphocytic leukemia and multiple myeloma.

Dr. Lunning remains hopeful that the next treatment Witt undergoes takes care of those stubborn cancer cells.

Witt and his wife remain hopeful as well. "CAR-T gave us a great summer and fall together as a family," Jen Witt said.

"Cancer requires self-focus," Witt said. "It's not enjoyable, but there's a good aspect to it because you must rest and be quiet. There is a peace in that. You can't focus on the needs of others as you want. That period made me stronger. It has helped me appreciate the opportunity to be a better helper and listener."

EDUCATION FEATURE

INTEGRATING POINT-OF-CARE ULTRASOUND IMPROVES PATIENT CARE

Among academic health science centers, UNMC's Department of Internal Medicine is an early adopter in training residents with point-of-care ultrasound (POCUS) to help guide clinical decisions at the bedside.

The residency training program adopted POCUS in 2016 with seed money from then department chair Lynell Klassen, M.D., who recognized it as a change that would have a huge impact on clinical care and medical education.

There are a variety of POCUS machines, and many newer models are pocket-sized and compatible with cell phones and tablet devices, allowing providers to easily integrate POCUS into their daily practice. Machines also are becoming more affordable, helping fuel an explosion of POCUS training across the country. Studies have shown that POCUS can improve diagnostic accuracy for a variety of clinical syndromes, beyond that of traditional examinations and imaging modalities.

We started from scratch and have been fortunate to have support from the department and residency leadership," said Christopher Smith, M.D., assistant professor of internal medicine and director of the POCUS program. Dr. Smith is part of a core group of general internal medicine faculty involved in training residents.

After purchasing POCUS, Dr. Smith and Tabatha Matthias, M.D., assistant professor and former co-director of the program, implemented an annual faculty development program to create a core group of POCUS-trained faculty. The curriculum for internal medicine residents was implemented later that year.

So far, about 125 residents have received POCUS training over the past three years. The curriculum includes annual workshops, a lecture series, online learning, interest group meetings, a dedicated one-week POCUS rotation and one-on-one scanning with POCUS faculty.

"Our goal is to teach health care providers how to integrate POCUS into clinical decision-making and ultimately improve the care of our patients," Dr. Smith said. "We're ahead of the curve not only because of when we started teaching POCUS but also because we have a robust, longitudinal curriculum.

"We continue to grow our program with a goal of being national leaders in POCUS education. We know that by providing our trainees with this background, it will give them a leg up in their careers."

POCUS also is being integrated into the College of Medicine's new curriculum, enabling medical students to graduate with ultrasonography skills.

POCUS can be used to help diagnose, screen, monitor responses to therapy and perform procedures, which helps guide clinical decisions at the bedside. Emergency medicine has been using it for about two decades, Dr. Smith said, but in the past decade, it's grown into other areas of medicine.

Studies show that integrating POCUS improves the accuracy of diagnosis above and beyond a standard clinical work-up, Dr. Smith said. An increasing amount of research also supports that POCUS improves the care of patients, which is the primary goal.

"Before using POCUS in internal medicine, we had our standard approach using patient history, physical, laboratory and imaging data," Dr. Smith said. "We still do all those things, but POCUS gives us additional and important real-time data, which can impact our clinical decision-making.

In addition to the traditional physical exam using a stethoscope, Dr. Smith said, POCUS allows clinicians to visualize organs such as the heart and lungs to further improve diagnostic accuracy. "POCUS isn't as robust as formal diagnostic imaging, but it will give me useful information to make the best diagnosis I can and guide my management decisions," he said.

New residents participate in a daylong workshop to learn cardiac and thoracic POCUS, as well as fundamental principles.

"We also revamped our procedural training to fully integrate POCUS to include all the standard bedside procedures we do as internists, including paracentesis, thoracentesis, central line placement and lumbar puncture," Dr. Smith said. "All of these

We see a lot of patients with multiple chronic medical conditions, and figuring out what is making them sick can be difficult. In addition to traditional clinical information, POCUS can quickly help confirm a diagnosis and guide treatment. For example, a patient may present with trouble breathing and POCUS quickly can help us determine if the patient has heart failure, pneumonia or a pulmonary embolism.

Christopher Smith, M.D.,
assistant professor of internal medicine
and director of the POCUS program

now have an element of using ultrasound to improve our accuracy in performing procedures."

Each spring, residents participate in an interprofessional training to learn abdominal POCUS. This workshop is in collaboration with the diagnostic medical sonography program in the College of Allied Health Professions, and sonography students serve as coaches.

"Sonography students have expertise in performing full diagnostic ultrasound exams, so it made sense to use their skills in teaching our residents," Dr. Smith said. "It's an innovative educational intervention that we've been able to study and demonstrate positive educational outcomes."

Kim Michael, director of the diagnostic medical sonography program in the College of Allied Health Professions**,** said she and Dr. Smith share a passion for ultrasound, which sparked the collaboration four years ago.

"Early on, we recognized the potential for improving the educational process for our learners and the benefit of bringing faculty together from other colleges," Michael said. "We are both members of UNMC's Interprofessional Academy of Educators (IAE), which helped move our POCUS project forward. With an IAE grant and IAE faculty, we were able to design an educational research project that is now in its third year of implementation."

It was, she said, an opportunity to share faculty knowledge of ultrasound with others.

"For our diagnostic medical sonography students, the POCUS workshop gives them a chance to share their skills and knowledge with internal medicine residents and improve communication, leadership and teamwork skills, which makes them better prepared for being part of a health care team," Michael said. "I also use this workshop as a recruiting tool for our program. The interprofessional training is valued and practiced, plus everyone enjoys it."

In July 2019, the internal medicine department launched a dedicated rotation for POCUS and POCUS-guided procedures, in which residents spend a week on service with faculty to enhance their ultrasound skills. The rotation utilizes online learning, high-fidelity simulation, interprofessional education with echocardiography, and hands-on practice with POCUS faculty. A lecture series also has been integrated into the core education program, as well as an interest group for individuals who want extra exposure.

Derek Kruse, M.D., assistant professor in the UNMC Division of Pulmonary, Critical Care, Sleep & Allergy, said POCUS is useful in treating critical care patients, as well as patients seen on the Pulmonary Consult Service.

"When I started practicing medicine, we didn't use ultrasound for central line placement, chest tube placement and other procedures," he said. "We did them all without imaging guidance. Now, we've been given this ability to see and guide our procedures and treatment, which we're passing down to future generations."

In the future, POCUS will become the standard of care, he said.

Traditionally, physicians have relied on surface landmarks, he said, which aren't always accurate and can result in complications for the patient. "We've now brought image-guided procedures bedside for all patients, which is important for critical care patients who aren't stable enough to be taken to interventional radiology.

"Today, we can save patients the trip and have procedures done at the bedside by a provider who knows them," Dr. Kruse said. "It's easier, safer and the patient doesn't have to leave the room."

Faculty, he said, are creating curriculum for medical students, residents and fellows that focuses on quality control – acquiring quality images, interpreting them accurately and acting upon them.

"Curriculum development can be challenging as point-of-care ultrasound lacks standardization in definitions, appropriate use and quality control," Dr. Kruse said. "It's difficult but also exciting to be a part of the development of the curriculum for so many current and future providers."

Drs. Smith and Kruse hope to have a dedicated sonographer work with residents to further strengthen ultrasound proficiency.

In 2018, internal medicine resident Jessica Rydberg, M.D., completed POCUS training in her first year of residency training and understands its value, particularly in determining a patient's fluid status and assessing cardiac function. "It's an important advancement for patient care," she said. "It's quick and an easy extension of the physical exam."

UNMC rheumatologist Amy Cannella, M.D., praises the use of ultrasound in rheumatology. "It's an invaluable teaching tool for fellows and allows us to develop skills in anatomy and diagnose rheumatic disease. We can see in real-time what lives beneath the skin in a dynamic and bilateral fashion."

In addition, she said, "guided procedures have been shown to be more successful and reduce patient discomfort more than non-guided procedures**.** At the bedside - in both ambulatory and inpatient settings - we can better educate patients by explaining their imaging and teaching them about their disease and treatment regimens."

WELLNESS FEATURE

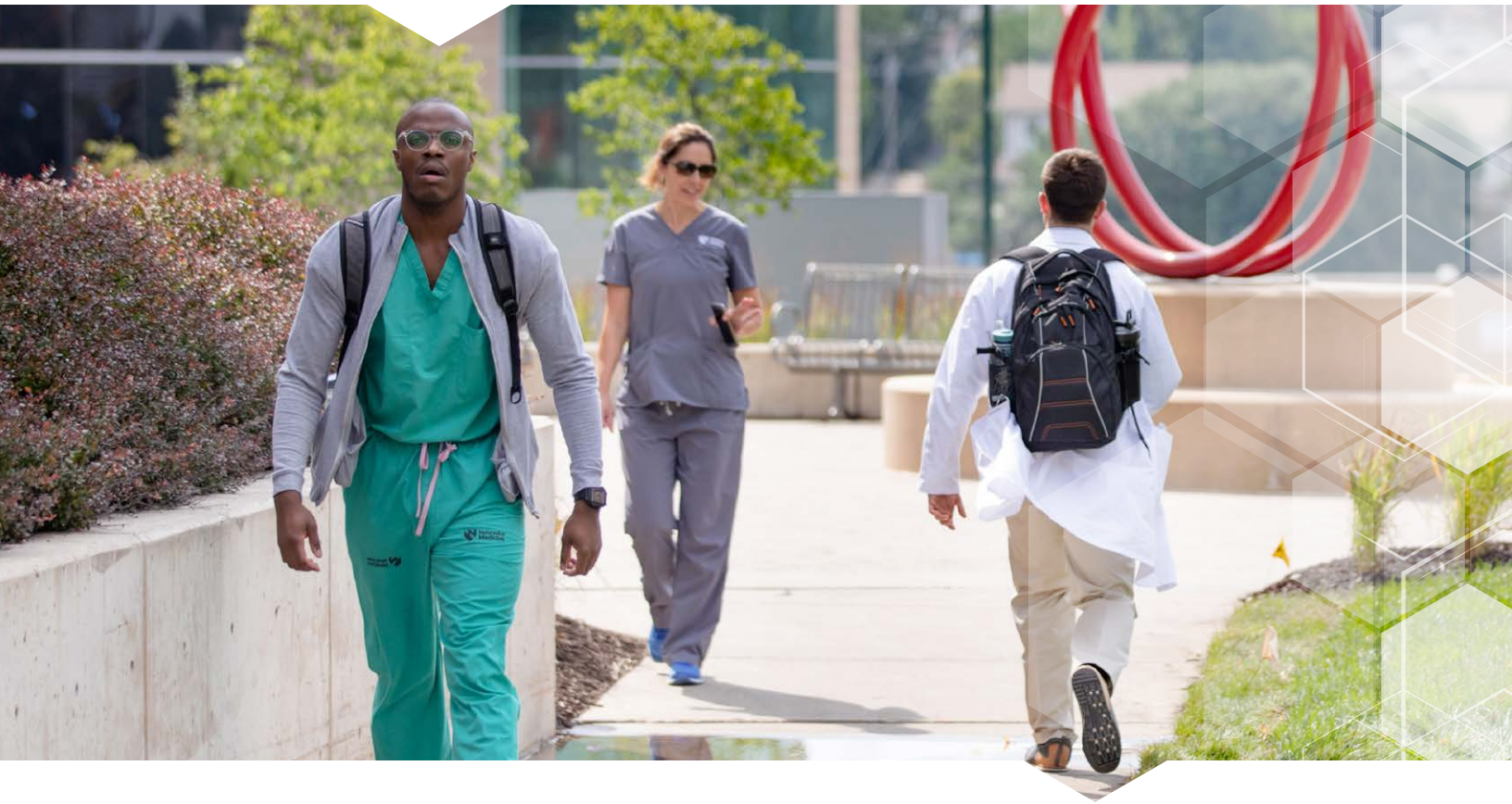
BUILDING A CULTURE OF FACULTY, RESIDENT WELLNESS

Resident and faculty wellness stands front and center at UNMC.

"Our strategy is to provide opportunities and education to help residents promote well-being in their lives, whatever that means to them," said Jennifer Harsh Caspari, Ph.D., assistant professor, director of behavioral medicine in the UNMC Department of Internal Medicine. "Wellness is not a 'one size fits all' approach. Instead, we offer many options to help our residents live their best lives while in their residency program."

UNMC's Internal Medicine Resident Life Program, with the full support of UNMC's primary clinical partner, Nebraska Medicine, has set out to tackle resilience and burnout on a resident level by providing social events, networking sessions, mentorship groups and interactive conferences to promote wellbeing.

Dr. Caspari credits the program's success to its organic development, its purposeful focus on integrating activities into the workday and in asking residents to interpret what being well means to them, in lieu of making assumptions. "What hasn't worked are the activities we've attempted to build into the program that occur outside of work hours and are solely for residents," Dr. Caspari said. "Integrating wellness into usual residency life tends to work best. It can't be extra. The activities that tend to work well outside of the usual workday are those that include residents' families."



As a result, there are outings, noon lectures, a retreat, intramural sports coordination, twice-a-year allocation of wellness half days, regular opportunities to discuss emotional responses to being a resident physician and a peer mentorship program.

There's also a resident life committee that oversees the program, Dr. Caspari said, and each year, the program components are modified based on resident feedback.

In addition, UNMC's Graduate Medical Education leaders are well aware of busy resident schedules and the importance of removing unneeded administrative burdens. To further improve upon the clinical learning environment, UNMC and Nebraska Medicine opened the 1,900-square-foot House Officer Wellness Lounge, complete with:

+ A work area, including a conference room and computer work stations as well as a refrigerator and microwave;
+ An exercise area with a treadmill, a stationary bike and an elliptical machine, as well as male/female showers and restrooms; and
+ Three relaxation rooms and a meditation room.

"This is something that absolutely needed to be done," said UNMC Chancellor Jeffrey P. Gold, M.D. "We want UNMC/Nebraska Medicine to be a leader among academic medical centers in setting the standard for providing a clinical learning environment that focuses significantly on the wellness of our residents."

Dr. Caspari, along with Micah Beachy, M.D., Shannon Boerner, M.D. and Sarah Richards, M.D., also has led strategic efforts to support faculty wellness in General Internal Medicine (GIM), reduce burnout and strengthen its culture of caring.

Studies, too, have found, Dr. Boerner said, that physician job satisfaction increases when they are allowed to work on their personal passion projects or interests, even if only for a small portion of their overall duties. Satisfaction, engagement and faculty retention are also closely linked. Physician wellness is crucial, she said, not only for individuals, but also to provide optimal patient care. "When we are well, we take better care of our patients," she said.

Never underestimate the value of simple efforts, Dr. Boerner said, noting how GIM faculty have responded positively to a reminder of a small opportunity: employees can mail (prepaid, personal) packages from work. Faculty appreciate these small chances to more easily juggle the demands of busy work and personal lives.

Another simple way to boost faculty wellness? GIM colleagues have at times begun meetings by asking one another what they do that makes them smile. "You literally see and feel the room's energy shift," she said, as faculty smile, laugh and remember why they love what they do.

MENTORING FEATURE

STRATEGIC MENTORING CONNECTS FACULTY, RESOURCES

Physicians have multiple opportunities for employment, and academic medicine competes to recruit and retain the best and brightest to train future generations of physicians. UNMC actively works to address the unique needs of academic faculty and provide them a competitive edge in today's complex and fast-paced educational, research and patient care environments.

Mentoring is a strategic focus, because it supports faculty as they navigate the multitude of demands required of academic physicians. Too often, finding and maintaining a mentoring relationship is left to chance, which can result in uneven or inconsistent support of faculty. At UNMC, the department of internal medicine actively addresses these needs to ensure faculty have resources and assistance for their career development.

In 2015, Shannon Boerner, M.D., was named director of faculty mentoring and development to help connect the department's nearly 300 faculty members to resources across campus. Under her leadership, the department provides an opportunity for all newly hired faculty to be linked with a faculty mentor. This allows active support and onboarding during the first year of an academic appointment.

Over the past four years, Dr. Boerner has matched more than 80 faculty members with an individual mentor. These relationships serve to support goal setting, active career planning and accountability. A large majority of participants (70%) have strongly agreed that their mentors provided them with knowledge and expertise in the areas they sought guidance.

Also new in the department is a Faculty Development Task Force. Chaired by Dr. Boerner, the task force includes representation from each division. Members serve as liaisons for their divisions and handle issues related to mentoring programming, career development and leadership skills.

The department also has used the Association of American Medical Colleges' StandPoint survey as a benchmark to assess the many facets of faculty life in the department. The latest results indicate a highly engaged and productive faculty, Dr. Boerner said. She and the Task Force also utilize these results at division levels to stimulate discussions and activities that address their needs.

> The strategic use of mentoring enables us to better support, engage and retain outstanding faculty.
>
> Shannon Boerner, M.D.

COVID-19 FEATURE

TAKING A LEADERSHIP ROLE IN THE COVID-19 OUTBREAK

When a novel coronavirus, now called COVID-19, emerged with a deadly outbreak in China, then spread to other countries around the globe, in early 2020, the world turned to UNMC. International experts from the Division of Infectious Diseases were among those who stepped forward in time of need.

Mark Rupp, M.D., chief of the UNMC Division of Infectious Diseases, was a frequent voice of reason and trusted source of information for national news media looking for answers as the virus spread. Dr. Rupp's clearheaded authority was a steadying presence among a cacophony of media reports.

Angela Hewlett, M.D., associate professor of infectious diseases, is medical director of the Nebraska Biocontainment Unit. The biocontainment unit hosted multiple coronavirus patients, and its team again took on a world leadership role in a time of uncertainty.

"In our role as a biocontainment unit, and one of the leaders in the United States in biocontainment, we should not only be monitoring this closely but serving as an example for others," Dr. Hewlett said.

"We should serve in that leadership role and provide that guidance for others in their infection control management," she said.

James Lawler, M.D., M.P.H., is one of five co-directors of the Global Center for Health Security at UNMC, which is the umbrella for all of the med center's biopreparedness efforts. Dr. Lawler was among UNMC leaders to work with the Centers for Disease Control and Prevention (CDC) and other federal agencies.

UNMC assisted with the federal quarantine of 57 Americans from the Wuhan, China area who spent 14 days at the Nebraska National Guard's Camp Ashland location. In February and March, the medical center also monitored and treated 15 Americans evacuated from the Diamond Princess cruise ship, who were sent to the National Quarantine Unit in the Training, Simulation and Quarantine Center (TSQC) at the Dr. Edwin G. & Dorothy Balbach Davis Global Center in Omaha.

Dr. Lawler is among numerous infectious diseases faculty forever at work, not only at the forefront, but also behind the scenes, to prepare for outbreaks like this one.

"This is unfortunately something that is going to continue to happen," he said. "New and emerging diseases are not going to stop anytime soon."

Andre Kalil, M.D., professor of internal medicine at UNMC, led a randomized, controlled clinical trial to evaluate the safety and efficacy of the investigational antiviral remdesivir in hospitalized adults diagnosed with COVID-19. It was the first clinical trial in the U.S. to evaluate an experimental treatment for the virus. The National Institutes of Health's (NIH) National Institute of Allergy and Infectious Diseases regulated the trial. What normally would have taken years was up and running in a few weeks, with an UNMC infectious diseases physician at the helm.

When asked by a national media outlet if he was concerned for his own safety, Dr. Kalil was resolute.

"You go, man," he told the news website The Daily Beast. "That's your work."

BY THE
NUMBERS

EDUCATION

82 HOUSE OFFICERS
[**69** Int Med & **13** Med Peds]

491 MEDICAL STUDENT CLERKSHIPS/ROTATIONS COMPLETED
(This huge jump is due to transition of curriculum)

100%
INT MED BOARD PASS RATE

#1 INT MED IS STILL THE NO. 1 REQUIRED CLINICAL CLERKSHIP AT UNMC

RESEARCH

57 FUNDED PRINCIPAL INVESTIGATORS

$23,352,318
IN EXTRAMURAL RESEARCH FUNDING

390 PUBLICATIONS

CLINICAL

23 CLINICAL LOCATIONS

151,861
INPATIENT VISITS
(takes the place of hospital patient days)

762,284
WORK RVUs

$94,084,345
IN PROFESSIONAL FEE CHARGES

10,240
RESIDENT MANAGED MIDTOWN CLINIC VISITS

ADMINISTRATION

248 INTERNAL MEDICINE FACULTY

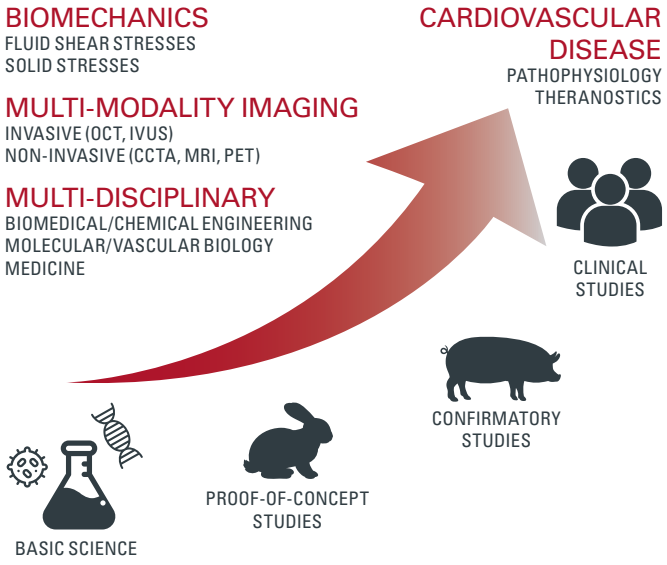
INTERNAL MEDICINE

INTERNAL MEDICINE DIVISIONS

DIVISION OF

CARDIOVASCULAR MEDICINE

DANIEL R. ANDERSON, M.D., PH.D.
ASSOCIATE PROFESSOR, INTERNAL MEDICINE
CHIEF OF CARDIOVASCULAR MEDICINE



CLINICAL

NEW CATH LAB HELPS LEAD THE WAY

Andrew Goldsweig, M.D., is excited about a future made possible by new programs and a $32 million state-of-the-art facility that opened in December.

"In the big picture, our goal as a division is to be on the cutting edge of technology in a rapidly evolving field," said Dr. Goldsweig, assistant professor, interventional cardiology, and associate medical director for structural heart disease. "There are other cardiologists in Nebraska, and that's fine.

"But when things get complex, we want people to look to us."

The new facility was designed specifically to treat patients with these most complex conditions. Located on the ground floor of University Tower, the new cath lab – or cardiac catheterization and electrophysiology lab – actually contains seven new labs. These feature the latest in Philips imaging equipment and "the lowest radiation emission of any cath lab anywhere," Dr. Goldsweig said.

There are rooms dedicated to coronary interventions, valve replacements, electrophysiology interventions and heart failure studies.

The facility also is capable of accommodating up to 18 patients overnight. In contrast to the old model of waiting room, pre- and post-procedure rooms and hospital room, these patients will have the comfort of their own dedicated rooms both before and after their procedures.

"It's a hospital unit built into the new facility," Dr. Goldsweig said.

The new cath lab boasts special equipment to facilitate the opening of chronically-blocked coronary arteries, catheter-based repair or replacement of heart valves, catheter-based closure of defects in the heart and treatment of atrial and ventricular arrhythmias.

The facility will support the continued expansion of clinical research and device trials.

"We'll be able to do more," in terms of both variety and volume, "and do it better," Dr. Goldsweig said.

RESEARCH

PRECISION MEDICINE IMPACTS STENT PROCEDURES

Stents used to open blockages in branching coronary arteries tend to narrow, then fail, in a short time, and at an alarming rate. Why?

"What we do in putting stents in branching heart arteries nowadays is a one-size-fits-all approach. However, each individual patient's branching heart artery is different," said Yiannis Chatzizisis, M.D., Ph.D., associate professor of medicine and director of the UNMC Cardiovascular Biology and Biomechanics Laboratory.

But now, a team of UNMC physician-scientists and engineers is working on novel ideas to bring "precision medicine" to this process.

"In our lab, we're using a computational stent platform and artificial intelligence tools to find what stent technique fits best in individual patients," Dr. Chatzizisis said. "Our computational stent simulation platform may ultimately provide suggested techniques – in real-time – for physicians, based on the physiology and anatomy of the individual patient's bifurcations."

Meanwhile, Rebekah Gundry, Ph.D., professor of cellular and integrative physiology, assistant chief of basic and translational research, cardiovascular medicine and director of the CardiOmics program, is leading an effort to develop a better model for preclinical testing in drug discovery.

Cell lines represent a select group of proteins, and animal models do not perfectly predict human heart response.

But, cardiomyocytes, or cardiac muscle cells, derived in a dish from stem cells, can represent how a human heart will behave.

"These can be potentially very valuable in the future for drug screening," Dr. Gundry said. In drug discovery, either in academic settings or at pharmaceutical companies, "One of the important tests is to make sure the drug is not toxic to the heart."

Dr. Chatzizisis's team uses a variety of tools – 3D animation, angiography, CT and other coronary imaging tests – to re-construct patient bifurcation geometries in powerful laboratory computers. At the Gundry lab, "We develop and use cutting-edge mass spectrometry technology to study proteins and glycans within the context of cardiac biology and disease," she said.

EDUCATION

DIVISION EXPANDS FELLOWSHIP, ADDS CRITICAL CARE ROTATION

The Division of Cardiovascular Medicine is expanding its fellowship program from five to seven positions, effective with the upcoming 2020 match.

The additional fellowships will allow UNMC to add a cardiology critical care rotation. "This expansion is also important to allow us to continue to balance the growing service volumes and ensure opportunities for effective education and research," said Arthur Easley Jr, M.D., director of the fellowship program.

"Cardiology has first-rate imaging, cath and heart failure programs," said Poonam Velagapudi, M.D., who is co-associate director of the fellowship program with Adam Burdorf, D.O.

Adding fellows enables expansion of services including critical care and also would allow UNMC to match other institutions, nationally, in a key area.

"This was an educational need," Dr. Velagapudi said.

With expected growth, it eventually would allow UNMC and Nebraska Medicine to open a cardiac critical care unit that would be staffed by cardiologists and by fellows on rotation.

Cardiology educators and learners also are taking advantage of iEXCEL, UNMC's transformative model for health care education, training and research.

The interactive digital iWall – a 2D curved wall that consists of 12 touch screens – has become the go-to tool for cardiology's imaging conferences, Dr. Velagapudi said.

"One can zoom in and show the fellows all of our findings," she said. "It's been helpful for our teaching."

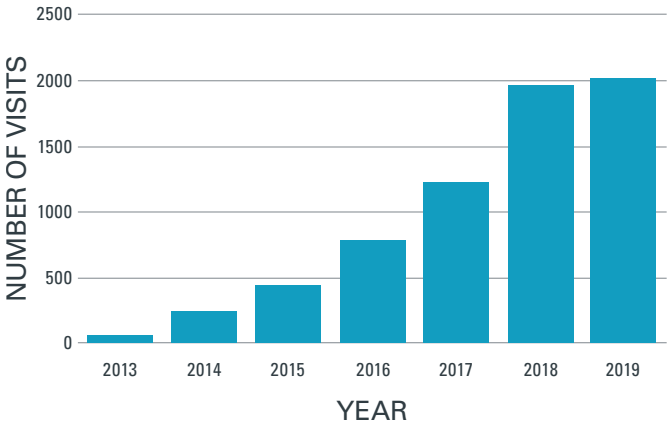
Cardiology faculty, including Yiannis Chatzizisis, M.D., Ph.D., have used the iEXCEL VizHub's interactive augmented- and virtual-reality technology to better study coronary anatomy. Importantly, this effort has been undertaken as part of Dr. Chatzizisis' NIH-funded research, bridging research and education. Through simulation and visualization, while wearing high-tech glasses and goggles, medical students and cardiology fellows can get what Dr. Velagapudi called a "real-world view."

DIVISION OF

DIABETES, ENDOCRINOLOGY & METABOLISM

CYRUS DESOUZA, MBBS
PROFESSOR, INTERNAL MEDICINE
CHIEF OF DIABETES, ENDOCRINE & METABOLISM

DEM TELEHEALTH VISITS 2013 – 2019



CLINICAL

TELEMEDICINE SERVICES ENHANCE PATIENT, PROVIDER ACCESS

Leslie Eiland, M.D., sees the bulk of her endocrinology patients online.

For 18½ days each month, her physician-patient experiences are via Zoom, a video conferencing desktop platform. Only 2½ days are spent with patients in person.

The UNMC Division of Diabetes, Endocrinology and Metabolism (DEM) launched its telemedicine clinics in 2013 at Mary Lanning Memorial Hospital in Hastings, Neb., and has since expanded to nine sites across Nebraska and Iowa.

"Sites have found us," said Dr. Eiland, medical director of the Endocrine Telehealth Program and assistant professor, DEM, at UNMC. "Community hospital administrators have found out how successful our clinics have been and how happy our patients are and then ask to be one of our next telemedicine sites."

Last year, DEM logged nearly 2,000 telemedicine visits across its nine sites, including 800 at Mary Lanning. The high volume is supported well because Mary Lanning and UNMC's primary clinical partner, Nebraska Medicine, use the same online medical records management system, which allows for easy and efficient sharing of medical records.

Dr. Eiland also serves as the content expert for deidentified medical cases via their ECHO program, which allows dissemination of knowledge and support twice monthly to primary care providers at Federally Qualified Health Centers across Nebraska and Iowa. "ECHO is a high-yield way to disseminate best practices and learn from case-based presentations," she said. "Providers can present challenging cases to the multi-disciplinary group, who then discuss the case and come up with recommendations together."

Sharing of knowledge is particularly helpful since the majority of the state's endocrinologists practice in Omaha and Lincoln; three others practice in the rural communities of North Platte and Norfolk, Nebraska.

RESEARCH

STUDYING THE LINK BETWEEN OBESITY AND TYPE 2 DIABETES

It's known that obesity increases the risk of developing type 2 diabetes.

Now, Saraswathi Viswanathan, Ph.D., associate professor in the UNMC Division of Diabetes, Endocrinology and Metabolism, wants to better understand the link between the two diseases.

As a result, her team studies a protein called thromboxane-prostanoid receptor (TP-R). Thromboxanes are fatty acid metabolites known to mediate inflammation by binding with TP-R.

"Our preclinical studies in a mouse model of diet-induced obesity show that TP-R protein expression is increased in the fat tissue of obese mice compared to lean mice," Dr. Viswanathan said. "Our studies in genetically-engineered mice show that mice lacking the TP-R gene gained less body weight and showed improvements in glucose-handling on a high fat diet."

Noting that insulin resistance is a metabolic condition found in prediabetic subjects, the team hypothesizes that TP-R may be a missing link between obesity and type 2 diabetes. "Based on our animal studies, we hypothesized that a link exists between TP-R and obesity-associated insulin resistance in humans," she said.

Dr. Viswanathan collaborates with UNMC's Cyrus Desouza, M.B.B.S., and Corrigan McBride, M.D., to investigate the link between TP-R and human obesity. The project is funded by a pilot award through the Great Plains Institutional Development Award (IDeA)-Clinical Translational Research (CTR). The IDeA-CTR funding, she said, is instrumental in developing a clinical and translational project and to train a clinical fellow and an undergraduate student on several aspects of research. The proposed studies will lead to the development of a novel biomarker or treatment modalities to treat obesity and/or type 2 diabetes in humans, she said.

Because obesity is a risk factor for pancreatic cancer and because the presence of obesity and insulin resistance aggravates alcohol-associated liver disease, Dr. Viswanathan also investigates the role of obesity-related factors in altering the pathogenesis of these other diseases. Collaborations with UNMC's Carol Casey, Ph.D., Surinder Batra, Ph.D., and Satya Rachagani, Ph.D., have enabled her to expand her research interest in obesity to other research areas and obtain National Institutes of Health funding.

EDUCATION

GROWTH CONTINUETS IN UNDERGRADUATE, FELLOWSHIP PROGRAMS

With the recent UNMC medical school curriculum change, DEM faculty (Amy Neumeister, M.D., Lynn Mack, M.D., Brian Boerner, M.D., and Robert Bennett, Ph.D.) collaborated with other UNMC faculty to redesign the endocrine block, integrating anatomy, physiology, pathophysiology and pharmacology into a seamless, robust educational experience.

Redesign of the endocrine block allowed prioritization of material, assessment of teaching strategies and a balance of lecture and small group activities. Collaborators report positive feedback from students.

In the graduate medical education realm, UNMC's Endocrinology Fellowship Program has a strong track record of preparing top-notch clinicians, educators and researchers.

The program's current faculty can attest to that.

"Several of our faculty are previous fellows who trained in our program," said Dr. Boerner, endocrinology fellowship program director and 2011 graduate of the program.

The program provides a well-rounded experience for trainees and allows for flexibility to tailor an individualized experience for each fellow. "We have unique ways in which we structure our outpatient experiences," Dr. Boerner said, noting that objective data helps ensure trainees see a variety of patients and allows for a broadened clinical experience.

With thyroid disease being the second most common reason patients are referred to endocrinologists (behind diabetes), fellows also attend newly designed and dedicated thyroid rotations, encompassing all thyroid disorders, including an intensive exposure to thyroid ultrasound and biopsy, and management of thyroid cancer.

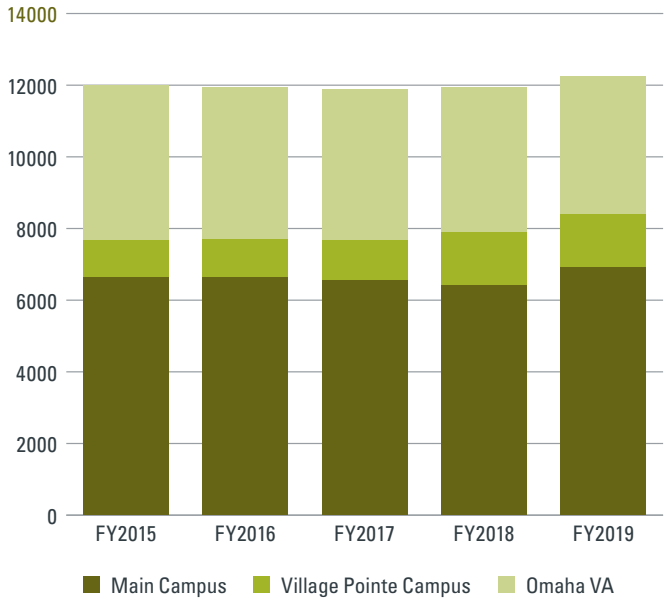
Under the direction of Whitney Goldner, M.D., and Anupam Kotwal, M.B.B.S., the thyroid rotation is a unique experience that prepares fellows to confidently manage any thyroid disorder, including complicated cases of thyroid cancer.

DIVISION OF

GASTROENTEROLOGY & HEPATOLOGY

FEDJA ROCHLING, MB, BCH, MBA
ASSOCIATE PROFESSOR, INTERNAL MEDICINE
INTERIM CHIEF OF GASTROENTEROLOGY-HEPATOLOGY

ENDOSCOPY VOLUME BY LOCATION



CLINICAL

TEACHING INTRICATE PROCEDURES, INSPIRING FELLOWS

The endoscopic procedures used as part of the inpatient pancreaticobiliary service are so precise that fellows who rotate through this service as part of their gastroenterology fellowship spend months observing and participating in them.

And more than likely they are shadowing Ishfaq Bhat, M.D., one of only two physicians who specializes in therapeutic advanced endoscopy and pancreaticobiliary diseases at UNMC.

Dr. Bhat, an assistant professor in the division of gastroenterology, shares this responsibility with his colleague, Shailender Singh, M.D., an associate professor in the same division.

Together, they see close to 100 patients every week.

The first pancreaticobiliary service line at UNMC and its primary clinical partner, Nebraska Medicine, will:

+ Provide a dedicated service for multi-disciplinary care of complex and advanced disease patients;
+ Offer complex therapeutic advanced endoscopy procedures;
+ Provide focused and advanced learning opportunities for trainees;
+ Create space for an advanced endoscopy fellowship in the near future; and
+ Help UNMC and Nebraska Medicine initiate a cutting-edge endoscopic procedural program.

"We hope to provide the best and latest care to Nebraskans close to home," Dr. Bhat said.

Dr. Bhat wants to inspire other physicians to pursue a career in pancreaticobiliary medicine and interventional endoscopy and is optimistic about doing just that as the number of fellows who rotate through the service increases next year from nine to 11.

"This service exposes the fellows to medically complicated patients, precise endoscopic procedures and interdisciplinary care teams at one time, which really helps them determine if this subspecialty is something they want to pursue as a career," he said.

RESEARCH

STUDY AIMS TO PREVENT SCARRING OF LIVER TISSUE

Alcohol use is so commonplace that many people might be surprised to learn that one quarter of adults in the United States are binge drinkers.

That's five drinks in one sitting for a man and four drinks for a woman.

"What's more alarming is the rising rate of binge drinking along with daily chronic drinking," said Benita McVicker, Ph.D., associate professor in the UNMC Division of Gastroenterology and Hepatology. "And no one really talks about the dangers associated with alcohol abuse, including the development of advanced liver disease, that is occurring at younger ages than seen in the past."

Dr. McVicker, whose research focus is on alcoholic liver disease, recently began an interdisciplinary research project on clinically relevant models to develop delivery methods for combination microRNA treatment of alcohol-associated liver disease.

The goal is to prevent the thickening and scarring of liver tissue that occurs.

David Oupicky, Ph.D., the Parke-David Professor in the UNMC College of Pharmacy, is the principal investigator. Dr. McVicker and Robert Bennett, Ph.D., professor in the UNMC College of Medicine Division of Diabetes, Endocrinology and Metabolism, are co-investigators on the five-year, $2 million R01 grant from the National Institutes of Health.

The idea is to use nanoparticles to inhibit communication between Kupffer and hepatic stellate cells, both of which are involved in fibrosis, or the scarring produced by the liver when injured.

Dr. Bennet is the stellate cell expert, who is using nanoparticles to target the protein these cells produce, which is a precursor to the scarring process.

Dr. Oupicky is the nanomedicine expert who provides the platform that Drs. Bennet and McVicker use to target the cells. Dr. McVicker uses the nanoparticles as a carrier of a microRNA, which is sent to the Kupffer cell. Her hope? That it will block the cell's ability to signal stellate cells.

The research is done using precision-cut liver slices taken from animal models, as well as donated human livers that are not suitable for transplant.

"It's an incredible honor and opportunity to access these donations and will further our research in ways that we would otherwise not be able to," Dr. McVicker said. "We are incredibly grateful to the generosity of the families."

EDUCATION

PATHWAY PROGRAM MAY EASE SHORTAGE OF LIVER SPECIALISTS

An exciting new pathway into transplant hepatology is on the horizon for fellows interested in pursuing this medical specialty.

The American Board of Internal Medicine has approved a three-year fellowship and training requirements after pilot programs at UNMC and other hospitals around the country have proven successful.

"It's an intense program but very rewarding," said Marco Olivera-Martinez, M.D., transplant hepatology associate program director in the division of gastroenterology.

Dr. Olivera-Martinez said this new pathway program becomes available during the 2020-21 academic year and is only available to candidates beginning training in the combined gastroenterology and transplant hepatology fellowship after the 2018-19 academic year.

While the standard, four-year training pathway is still offered for candidates to become eligible in both gastroenterology and transplant hepatology, Dr. Olivera-Martinez said, the new combined pathway program shortens the overall duration for fellows by one year.

"There's been a shortage of liver specialists all over the country, and this new pathway program makes it attractive and acceptable to those who want to care for complex patients," he said.

DIVISION OF

GENERAL INTERNAL MEDICINE & HOSPITAL MEDICINE

THOMAS TAPE, M.D.
PROFESSOR, INTERNAL MEDICINE
CHIEF OF GENERAL MEDICINE-ACADEMIC

CHAD VOKOUN, M.D.
ASSOCIATE PROFESSOR, INTERNAL MEDICINE
SECTION CHIEF OF HOSPITAL MEDICINE

CLINICAL

TOWER-BASED MODEL IMPROVES PATIENT CARE

Months ago, hospitalists at Nebraska Medicine were nomadic. They spent an average of one hour each day walking across the vast campus to see patients.

Nebraska Medicine has 582,000 square feet of space devoted to in-patient care, spread over more than 13 acres and four hospital towers – Clarkson, University, Lied Transplant and Werner. It's a lot of area for a provider to cover, and a lot of time was wasted walking from patient to patient.

But that all changed in July 2018 when Hospital Medicine transformed its delivery of patient care into a geographic, tower-based model, hospitalists and their teams were assigned to one of the four towers that house in-patient beds.

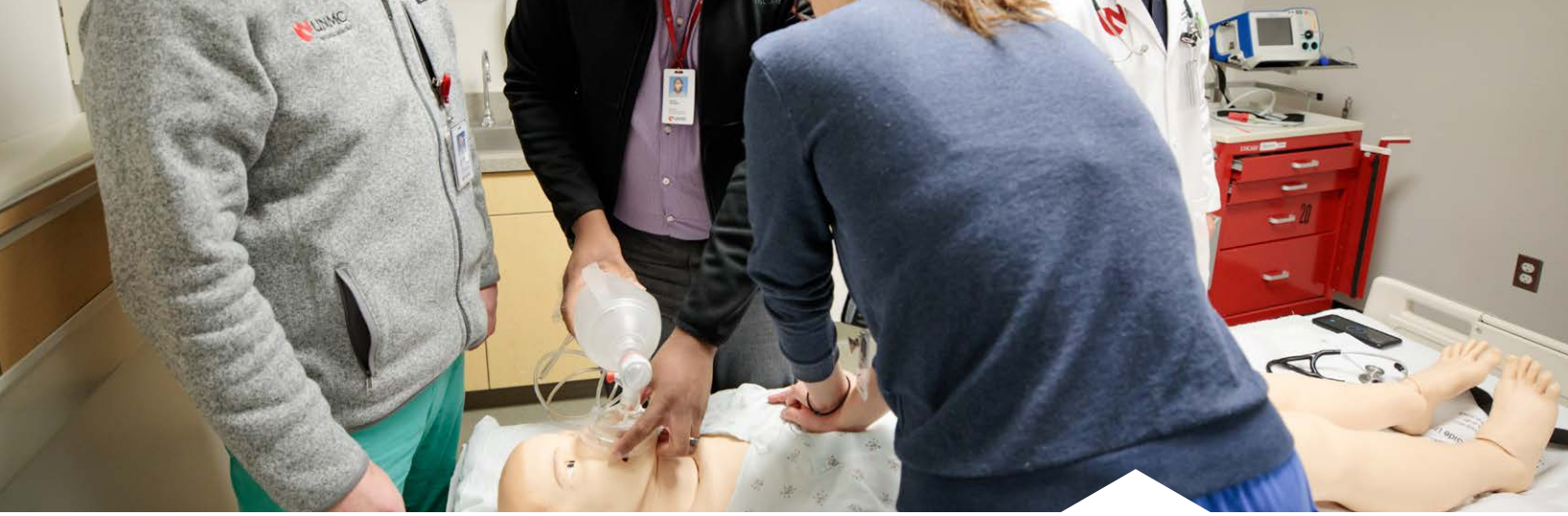
Now, less time is spent walking from room to room or floor to floor and more time is spent tending to patients.

"Efficiency and the amount of patients seen has increased," said Tabatha Matthias, D.O., assistant professor, internal medicine and hospital medicine director of clinical operations. "Hospitalists can see patients multiple times a day if needed."

Dr. Matthias was one of the physicians challenged by her section chief to devise a new geographic-based rounding strategy. It was no easy task. For three months, her team studied the existing process and how beds were assigned then developed ways to improve productivity, efficiency and well-being for 43 full-time and 18 part-time hospitalists, and 20 advanced practice providers.

The first task was to separate rounding from admitting responsibilities. Before, hospitalists admitted patients (a two-hour process) and then followed them throughout the hospital until discharge. Walking all over campus and pausing to admit their own patients was disruptive to completing admitting and daily rounding duties.

Now, a specialized admit triage team completes the admission process, assigns patients to rounding teams based on patient location, and handsoff care of the patient to the rounding hospitalist. Streamlined daily workflows, standardized handoff



processes, establishment of daily multidisciplinary rounds, monitoring of metrics, and continuous process improvement have been the keys to ongoing success.

The changes have improved hospital medicine team morale, quality of care offered, relationships with patients and families, and collaborative work with nurses, care transition nurses, and social workers," Dr. Matthias said.

Another measure of success: "People like our structure, and recruitment of hospitalists has skyrocketed," she said.

RESEARCH

HOSPITALISTS WORK TO MINIMIZE RISK OF COMPLICATIONS

Research oriented hospitalists at UNMC have made some ground-breaking discoveries on ways to make surgery safer for patients.

Assistant professor Jason Shiffermiller, M.D., and a team of 11 researchers received national attention when they published the results of a two-year randomized study on the intraoperative effect of chronic angiotensin-converting enzyme (ACE) inhibitor therapy. Patients on ACE inhibitors fared significantly better if they withheld their final preoperative dose.

The study, published in the October 2018 issue of the Journal of Hospital Medicine, helped confirm that the combination of ACE inhibitors and anesthesia can result in severe intraoperative hypotension that is difficult to treat. Dr. Shiffermiller explained that these very low blood pressures during surgery can cause damage to the kidneys and heart due to inadequate blood supply.

"The average person will undergo nine surgeries throughout his or her lifetime," Dr. Shiffermiller said. "Many of those surgeries occur later in life, when there is a greater potential for complications."

He and other hospitalists have been working to minimize the risk of complications. Beginning in 2004, they developed a co-management evaluation process for orthopedic patients, expanding that to neurosurgery patients in 2015.

"We assess the risk of heart attack for every patient before surgery," he said. Sleep apnea and other medical issues that might present a risk of complications during surgery also are assessed.

"Our goal is to prevent anything bad from happening to our patients during or after surgery," Dr. Shiffermiller said.

EDUCATION

CURRICULUM REVAMP BETTER PREPARES STUDENTS

Each spring, an awesome and overwhelming responsibility for the care of other people's lives is handed to students in the form of a medical degree.

And each summer, those students make the transition from watching to doing. It can be the scariest part for a new resident, and UNMC's newly revamped Phase 3 curriculum will better prepare students for that day.

"Starting a residency presents the biggest cognitive leap for new physicians," said Jill Zabih, M.D., assistant professor, internal medicine. "All of a sudden you have an MD after your name, and there's a lot of responsibility with that."

Dr. Zabih is part of a team that has been transforming this third and final phase of curriculum revisions, due to roll out in April 2020. That month will mark the beginning of the end for the first class of medical students to complete the entire new Training Physicians of Tomorrow curriculum.

The first phase began with foundational sciences (August 2017 – March 2019), followed by clinical rotations (April 2019 – March 2020) and now Phase 3 – career preparation (April 2020 – May 2021). Each phase is about three semesters long.

"This curriculum gives students the experiences they need to bridge that responsibility between med school and residency," Dr. Zabih said. "It gives them a taste of the real world."

Before, the fourth year of medical school was more informal and lacked structure to prepare students for residency. The new curriculum provides more structure and guidance. Students have their own career specialty track directors and career advisors who provide practice interviews and help with residency applications.

Students are required to complete three different sub-internships, six electives, a curriculum enhancement rotation, a residency preparatory course (capstone) and two unscheduled rotations.

The residency preparatory course includes multiple simulation cases, from sepsis to heart attack, in the simulation lab with a mix of manikins and standardized patients. Students also learn how to give a mini-lecture and simulate cross cover calls.

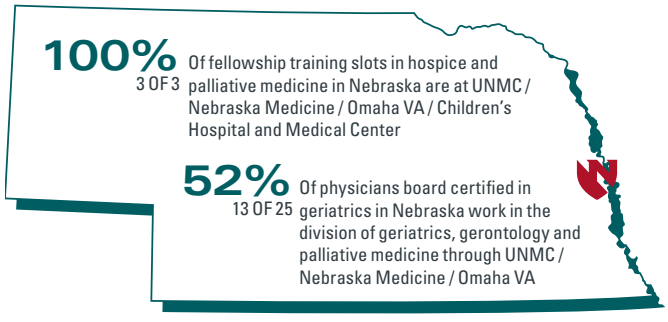
"We want students to achieve that balance of confidence and humility – of understanding that they do know medicine, but still don't know everything," Dr. Zabih said.

DIVISION OF

GERIATRICS, GERONTOLOGY & PALLIATIVE MEDICINE

ALFRED L. FISHER, M.D., PH.D.
NEUMANN M. AND MILDRED E. HARRIS
PROFESSOR OF GERIATRICS
CHIEF OF GERIATRICS, GERONTOLOGY, AND PALLIATIVE MEDICINE

DIVISION IMPACT



CLINICAL

DIVISION'S GROWTH ALSO EXPANDS COMMUNITY CARE

They function as medical directors and health providers in nursing homes, rehabilitation and hospice facilities. They make house calls, help patients get home care services and provide care to homebound vulnerable older adults.

Their workplaces aren't on UNMC's campus but are in half a dozen places in the Omaha area.

The Division of Geriatrics, Gerontology and Palliative Medicine has expanded care in nursing home and home settings with the growth of the division.

Assistant professors and geriatricians Debra Mostek, M.D., and Natalie Manley, M.D., and Tonya McLeay, a Nebraska Medicine nurse practitioner, are part of a team that works exclusively as community providers. Mandy Byers, M.D., and Karina Bishop, M.D., also are part of the team and spend part of their time in the community.

They say community care is fulfilling and gives them a much better understanding of the psycho-social issues, which impacts a patient's care. Providing care outside of the clinic and hospital increases UNMC's academic and clinical training reach. It also provides care for underserved populations.

"Care of patients in their environments enables us to evaluate the patients' living situation and modify treatment plans to facilitate the best outcomes," McLeay said. "We can identify environmental risks, reduce falls and get an overall view of the social context of the patient."

Dr. Manley said community care also promotes public health. "It's like we have our own micro-community where we have some amount of public health management over things – making sure people are getting their immunizations and educating the care staff on how to do appropriate care."

Some of the patients Dr. Mostek sees are homebound, vulnerable adults.

"I provide care to a population that is underserved," Dr. Mostek said. "Some folks are isolated, they have complex medical disease,

but they don't want to be a burden to others. I'm helping these folks, and they feel heard. It's been eye-opening for medical residents and students. We see some difficult situations."

RESEARCH

STUDY EXAMINES TRANSPLANT EFFECTS ON OLDER PATIENTS

It was once uncommon for people older than 60 to receive a bone marrow or stem cell transplant for cancers of the blood due to age-related factors and comorbidities. However, over the past decade, improved treatment regimens and supportive care have enabled more patients 60 and older to receive potentially lifesaving stem cell transplants.

Still, cognitive impairment is one of the post-treatment side effects often found in older adults.

In 2019, Thuy Koll, M.D., assistant professor of geriatrics, received a grant from the National Institute of Health's Institute on Aging to study the effects of stem cell transplant on cognition in older patients. Called Grants for Early Medical/Surgical Specialists' Transition to Aging Research (GEMSSTAR), the program provides support for early-career physician-scientists to launch careers as future leaders in aging- or geriatric-focused research.

As one of the few geriatricians in the country embedded in an oncology program, Dr. Koll sees older adults before and after stem cell transplants to help optimize their health and function.

Her focus is cognitive function in older adults after transplant, an area that is understudied, she said.

"We don't have a lot of information on the extent that cognition is affected," Dr. Koll said. "We want to know how common cognitive impairment is in this patient population and identify ways we can maintain or help improve their cognitive function as they go through treatment.

"As we get older, we have cognitive aging but also mild cognitive impairment and dementia. It's important we screen patients so we can identify issues that can be modified to improve or maintain cognitive function. Knowing this also can help us improve their quality of life and work on strategies to overcome cognitive issues."

During the study, Dr. Koll will conduct cognitive testing in patients before and after stem cell transplants.

EDUCATION

NEW FELLOWSHIP TO BOOST HOSPICE, PALLIATIVE MEDICINE TRAINING

UNMC has partnered with Children's Hospital & Medical Center and the Nebraska-Western Iowa VA Health Care System to create the state's first formal training program to help alleviate a shortage of physicians trained in hospice and palliative care medicine.

Physicians with hospice and palliative medicine training help patients with serious or terminal illnesses address problems with symptoms, including pain, depression and anxiety, as well as help patients and their families meet social and spiritual needs. They also help determine the most appropriate treatments for patients and avoid care that may not help them meet their goals.

The one-year fellowship will begin in July 2020 with two adult-focused fellows and, in 2021, a pediatric-focused fellow doing rotations in areas such as pain management, oncology, and home hospice. One fellow will be focused on pediatrics at Children's, while the adult-focused fellows will focus on rotations at Nebraska Medicine and the Nebraska-Western Iowa VA Healthcare System. New fellows will be selected each year.

"This is an exciting next step for UNMC, and proves the great need for expanding clinical providers, educators and leaders in palliative care," said Melissa Teply, M.D., program director of the fellowship and assistant professor in the UNMC Division of Geriatrics, Gerontology and Palliative Medicine. "The fellowship aims to increase the number of physicians providing palliative care services to patients and families, with the hope that graduating fellows will choose to practice locally and regionally. The fellowship also will focus on education as a way to expand the palliative care skill set of referring providers."

The fellowship will expand educational capacity for medical students, nursing students and resident physicians in end-of-life care.

DIVISION OF

INFECTIOUS DISEASES

MARK RUPP, M.D.
PROFESSOR, INTERNAL MEDICINE
MEDICAL DIRECTOR, INFECTION CONTROL & EPIDEMIOLOGY
CHIEF OF INFECTIOUS DISEASES

46,500
work RVUs

$12.5M
Extramural Funding

139
Scholarly Publications

CLINICAL

NEW SPECIALTY PROGRAM BENEFITS PATIENTS

Joint replacements can be life-changing for patients, at a rate of 1 million procedures and growing each year. The number is expected to rise to more than 4 million by 2030.

But infections can occur in 1-2% of joint replacements. These infections often result in multiple surgeries, prolonged antibiotic courses and significant disability for patients. Complex infections also can develop following trauma, along with routine surgeries, including fracture repairs and spine surgery.

The new Orthopedic Infectious Diseases Service, the only specialty program of its kind in Nebraska, is providing inpatient and outpatient comprehensive care to patients with complicated bone and joint infections. Emphasis also is placed on the prevention of bone and joint infections.

"Patients with complicated bone and joint infections often have prolonged treatment courses, including surgery, hospitalizations and long-term intravenous antibiotics. The service provides a multidisciplinary approach to the care of patients with these complex infections," said Angela Hewlett, M.D., director of the program and associate professor in the UNMC Division of Infectious Diseases. "Optimal medical care and management of these complex infections using evidence-based medicine and best clinical practices to improve patient outcomes is best accomplished using a multidisciplinary approach by orthopedic surgeons and infectious diseases specialists."

She said the collaborative care model benefits patients by providing correlated follow-up appointments, which allow the patient to see their orthopedic surgeon and infectious diseases specialist at the same visit.

"Another goal is to develop a nationally recognized program where we address the pressing research questions in orthopedic infections, such as how can they best be prevented," Dr. Hewlett said.

She is joined by Nicolas Cortes-Penfield, M.D., Rick Starlin, M.D., and Mark Rupp, M.D. Dan Cramer and Rachael Johnson are nurse practitioners dedicated to the team. Orthopedic surgery residents and infectious disease fellows also rotate through the Orthopedic Infectious Diseases service.

RESEARCH

PARTNERSHIPS PREVENT HEALTH CARE-ASSOCIATED INFECTIONS

The Division of Infectious Diseases is collaborating on a project that makes an impact at the bedside and in the lives of patients.

Through a unique health department/academic institution partnership, the Nebraska Infection Control Assessment and Promotion Program (ICAP) and Nebraska Antimicrobial Stewardship Assessment and Promotion Program (ASAP) are working with facilities throughout the state to prevent health care-associated infections.

The U.S. Centers for Disease Control and Infection, which awarded the Nebraska Department of Health and Human Services funding for these programs, estimates that about 3% of hospitalized Americans develop a health care-associated infection.

This could result in an annual loss of more than 70,000 lives.

Over the past four years, the ICAP has traveled more than 38,000 miles to assess more than 165 facilities in Nebraska, including acute care hospitals, long-term care facilities, dialysis centers, ambulatory/surgical/outpatient centers, dental clinics and long-term acute care hospitals. Experienced ICAP team members look for facility-specific infection control gaps and make evidence-based recommendations.

"This model is unique in bringing experienced 'outside eyes' to individual facilities in a peer-to-peer, non-regulatory format," said M. Salman Ashraf, M.B.B.S., associate professor of internal medicine and medical director for the ICAP program.

Evidence suggests it's been effective. Almost 80 percent of recommendations in critical access hospitals and 60 percent in long-term care facilities have been at least partially implemented at their one-year follow up.

The ASAP assesses antimicrobial stewardship and works to improve antibiotic prescribing practices. ASAP has provided expert guidance to more than 30 facilities throughout Nebraska. More than 250 Nebraska health care workers have attended Antimicrobial Stewardship Summits each year since the inaugural summit in June 2018.

Both ICAP and ASAP have introduced various training programs and web-based resources for Nebraska caregivers. A YouTube channel also has been established to share educational videos with health care professionals.

EDUCATION

HANDS-ON LEARNING, SOCIAL MEDIA SPUR STUDENT, FACULTY GROWTH

The Division of Infectious Diseases continues its cutting-edge efforts to find new ways to educate today's learners for tomorrow's future.

Students are immersed in a new phase I curriculum as part of the UNMC College of Medicine's Training the Physicians of Tomorrow – a new active learning-based curriculum that emphasizes hands-on learning techniques, small-group interaction, technology and research, and inquiry.

The division has restructured the way it teaches microbiology and infectious diseases.

"We've condensed first- and second-year classroom work," said Andrea Zimmer, M.D., assistant professor of infectious diseases. "That allows our students to go into a clinical setting much sooner than they did previously."

Dr. Zimmer co-directs a new course, Infectious Diseases Transitions, along with Sara Bares, M.D. The course integrates microbiology with clinical infectious diseases and utilizes interactive-learning modalities and case-based learning.

In "Contagion Theater," a faculty or student volunteer interrupts an ongoing lesson and simulates a disease presentation. Surprised learners must make a diagnosis on the spot.

Meanwhile, the division is a leader on campus in the use of social media to advance learning and career growth – for both students and faculty.

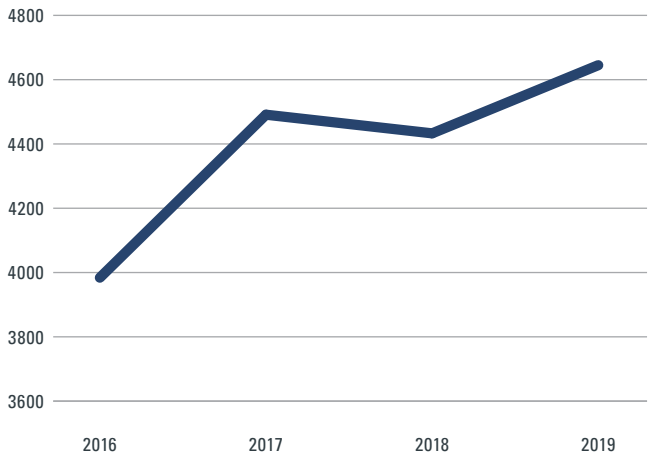
"You can use social media as a means to share this work you are doing, right now, instead of waiting a year or two later hoping someone asks you to give a talk," said Kelly Cawcutt, M.D., co-director of digital innovation and social media strategy with Jasmine Marcelin, M.D., for the UNMC Division of Infectious Diseases. "It's a powerful way to collaborate with other people."

DIVISION OF

NEPHROLOGY

TROY PLUMB, M.D.
ASSOCIATE PROFESSOR, INTERNAL MEDICINE
DR. DENNIS ROSS CHAIR OF NEPHROLOGY
CHIEF OF NEPHROLOGY

CLINIC VISITS



CLINICAL

PRE-DIALYSIS EDUCATION BOOSTS HOME DIALYSIS THERAPY

Patients with end stage kidney disease at UNMC choose home dialysis care at a rate nearly twice the national average. At UNMC, 23% of patients perform home dialysis, while only 12% of patients do nationally.

Troy Plumb, M.D., the division chief and medical director for home dialysis, attributes this to extensive pre-dialysis education by the team of doctors, nurse practitioners and nurses who work with dialysis patients.

Patients who have not received prior nephrology care or dialysis education and start dialysis in the hospital, often end up in an in-center dialysis clinic. The team at UNMC is determined to change this norm by utilizing a transitional care dialysis unit (TCU) model.

In the TCU, Ryan Mullane, D.O., works with a team of nurses, dialysis care technicians, social workers and dieticians to provide four weeks of intensive education to new dialysis patients and their care partners. By completing educational modules and regular visits with TCU specialists, dialysis patients gain a deeper understanding of their condition and types of dialysis care. At the end of the four-week period, patients decide whether they wish to pursue home dialysis or in-center hemodialysis.

"We hope that through transitional care we can help decrease issues patients experience and allow them to make the best choice for their care," Dr. Mullane said.

The majority of patients seen in the TCU pursue home dialysis therapy. Once a patient chooses home care, Dr. Plumb and the home care unit provide extensive training, so patients are equipped to confidently conduct their dialysis care at home.

"We are fortunate to be one of a handful of centers who are able to offer our patients access to a TCU to educate them about home dialysis," Dr. Plumb said. "As home dialysis patients report improved quality of life and more autonomy, our goal is to offer this therapy to as many patients as possible."

RESEARCH

ELEVATING KIDNEY TRANSPLANT AND OUTCOMES RESEARCH

There has long been a concerted focus on clinical and educational programs within the division of nephrology.

Now, with the addition of new faculty, there is renewed energy and a greater emphasis on growing research, said division chief Troy Plumb, M.D.

Recent additions to the division include Roslyn Mannon, M.D., Douglas Franz, M.D., and James Dong, Ph.D. "The goal of this effort is to establish nationally recognized research programs in kidney transplantation and kidney outcomes research," Dr. Plumb said.

Dr. Mannon has joined the division as the associate chief for research and vice chair for research mentoring and academic development in internal medicine. Dr. Mannon, who previously was the director of transplant research at the University of Alabama-Birmingham, brings with her a well-established kidney transplant research program to help nephrology further develop and grow its research footprint.

Her overarching goal is to gain further insights into the causes of late allograft failure, by studying both small animal models, and human transplant recipients, identifying novel pathways or molecules to create new therapies. She also will work with faculty and staff to advance transplant clinical trials and develop specimen biorepositories to support faculty and trainee research projects.

"There's an amazing amount of energy and excitement," Dr. Mannon said. "The transplant programs are highly functioning and they have great outcomes—that's an opportunity to provide patients with innovative strategies and give them a chance to try something new and different."

Dr. Franz completed his clinical and research fellowships in nephrology at Stanford University and brings experience in outcomes research, as does Dr. Dong, a biostatistician with a joint appointment in the UNMC College of Public Health.

"We are extremely excited to have this group of skilled researchers join our division," Dr. Plumb said. "In addition to their own research programs, the expertise they bring with them has already proven to benefit our existing group of talented faculty."

EDUCATION

FACULTY PHYSICIAN INSPIRES STUDENTS

Scott Westphal, M.D., has worked since 2016 to create excitement around nephrology for his UNMC students – a goal, he said, that can be tough to achieve. At a time when interest in the specialty is declining nationally, the educators within the division are working to change perceptions.

"One of my motivations to work with students is to reassert the value of nephrology," Dr. Westphal said. For one student, he did just that.

Dr. Westphal is the recipient of the 2019 UNMC Student Senate Distinguished Teacher Award. Nominations are made by students who believe their teacher has gone above and beyond in the classroom.

"Not only does Dr. Westphal teach with crystal clarity, but he also is the most compassionate physician I have ever met," wrote the UNMC student in their nomination letter. "This compassion extends to students and patients."

The student had the opportunity to work with Dr. Westphal outside the classroom, which provided an opportunity to see him interact with patients at an outreach clinic. In the classroom, the nominator said, Dr. Westphal taught complex and daunting concepts in a way that was easy to understand and intriguing to learn – a challenging task in a rigorous specialty like nephrology.

"It's really fun to break it down to the fundamentals and help students develop a systematic approach," Dr. Westphal said. "By the end, students have a good grasp, which is really rewarding as an educator."

DIVISION OF

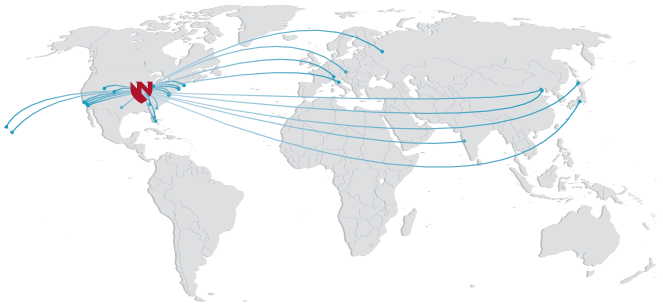
ONCOLOGY & HEMATOLOGY

JULIE VOSE, M.D., M.B.A.
PROFESSOR, INTERNAL MEDICINE
CHIEF OF ONCOLOGY & HEMATOLOGY

UNMC INTERNAL MEDICINE

Division of Oncology and Hematology

Outreach Around the World



4 Years **31** Cities **8** Countries

CLINICAL

MULTIDISCIPLINARY CLINIC BENEFITS PATIENTS

It's not unusual for patients to see an oncologist and then be referred to a multitude of other specialists. When that happens, worry and unresolved questions can last for days, even weeks.

The multidisciplinary clinic, located at the Fred & Pamela Buffett Cancer Center on the UNMC/Nebraska Medical Center campus, is designed to ease that process.

The geographic proximity of specialists within the cancer center has strengthened the coordination and response of the multidisciplinary care team and further enhanced the communication between health care providers, said Kelsey Klute, M.D., assistant professor in the Division of Oncology and Hematology.

"Our geographic proximity is important for our communication and makes the patient experience better," she said. "We want patients to receive services in as few trips as possible, especially for those who travel long distances."

Dr. Klute represents gastrointestinal oncology but is surrounded by a team of specialists including, in part, medical oncologists, surgical oncologists, radiation oncologists, genetic counselors and dieticians. "We try hard to consolidate care and make decisions as a group," she said.

While the team has long provided such coordinated care, the process was formalized in 2017 with the opening of the Fred & Pamela Buffett Cancer Center, which brought the cancer care team together under one roof to create a "one-stop shop" environment for patients.

The multidisciplinary clinic team meets weekly to review scans and discuss patient cases in greater detail. Patients benefit from the team being on the same page and outlining a complete plan. "We make a concentrated effort to make that happen pretty quickly," Dr. Klute said, rather than sending patients to multiple referrals and tests and then outlining a plan.

"Geographic proximity is important for our communication and makes the patient experience better," she said. "Our behind-the-scenes work makes it easier to consolidate and coordinate care for the patient."

RESEARCH

EFFICACY STUDIES SHOW PROMISE FOR MYELOMA, PANCREATIC CANCER

A physician-scientist, Sarah Holstein, M.D., Ph.D., wants to develop novel therapeutic agents for multiple myeloma.

UNMC's associate professor in the Division of Oncology and Hematology has a long-standing collaboration with the University of Iowa to study novel inhibitors, which disrupt intracellular trafficking processes.

The team's drug development efforts have yielded novel agents that have shown efficacy in mouse models of multiple myeloma, Dr. Holstein said. Myeloma cells produce large quantities of antibodies. The novel agents trap these antibodies inside the myeloma cells, ultimately leading to the death of the myeloma cells. The next step, she said, is to conduct additional toxicology screenings with the goal of submitting an investigational new drug application, which would allow for clinical trials. She notes that her team also is pursuing combination studies with clinically relevant drugs.

"This novel approach has potential, but progress is limited by availability of research dollars," Dr. Holstein said. "We recognize it's a huge leap to go from a mouse to a human, but we're optimistic because of the efficacy we've seen thus far and the key drug-like properties of our lead compounds."

The drugs also have shown efficacy in another deadly disease. "Our drug also disrupts mucin trafficking, which could kill pancreatic cancer cells," Dr. Holstein said.

Her team is working with UNeMed, the technology transfer company for UNMC, to pursue funding sources that would advance the research.

As a physician-scientist, Dr. Holstein appreciates the bench-to-bedside and bedside-to-bench discoveries that lead to improved outcomes for patients. And, she said, having physician-scientists in close proximity to each other inside the Fred & Pamela Buffett Cancer Center truly enhances that work.

It was, she said, one of the reasons she joined UNMC in 2016.

EDUCATION

FELLOWSHIP PROGRAM EVOLVES, EXPANDS

Alissa Marr, M.D., completed her fellowship training at UNMC and, in 2010, joined the faculty primarily as a lung cancer specialist. Today, her clinical focus is largely on the treatment of melanoma.

Having the foundational background to specialize in multiple areas is one reason she is passionate about leading the Oncology/Hematology Fellowship Training Program. "We want to ensure that fellows obtain a solid and broad education in blood diseases and cancers," she said.

That's why, in the summer of 2019, she accepted the role of fellowship director when Greg Bociek, M.D., stepped down after 16 years in the role.

"We want to make sure each fellow is on the right path and headed for success and also help them figure out their own career path," she said. "We also want to be proud of who we've trained and give them the building blocks to a successful career."

In addition to new leadership, the three-year fellowship program, which results in dual certification in both hematology and medical oncology, has undergone a few other changes in the past year, Dr. Marr said. Most notably, the curriculum was completely overhauled to allow for more didactic time and adjusted to an 18-month rotating curriculum.

"This was an extensive revamp to be more board-focused, which will benefit our fellows and subsequently, our patients," Dr. Marr said, calling out the extensive work done by Jairam Krishnamurthy, M.D., assistant professor in the Division of Oncology and Hematology, who completed his fellowship at UNMC in 2015.

The fellowship training program also is expanding, adding four new fellows instead of three. In all, nine fellows will be part of the training program for the 2020-21 academic year.

Trainees, she said, receive a comprehensive understanding of medical oncology and hematology, including management, plus the ability to do quality clinical and/or basic research and to interpret oncology literature.

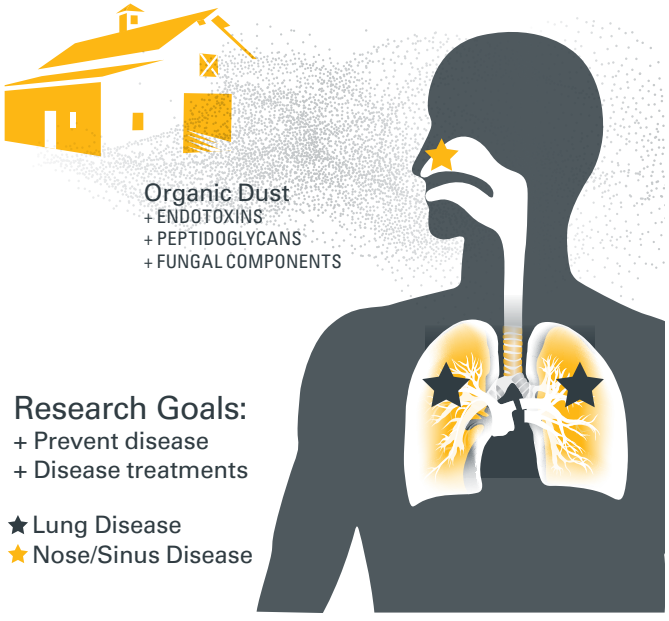
In the end, training more – and even better prepared – oncologists is key, she said, to enhancing the region's workforce, in both numbers and areas of specialization.

DIVISION OF

PULMONARY, CRITICAL CARE, SLEEP & ALLERGY

JOSEPH SISSON, M.D.
PROFESSOR, INTERNAL MEDICINE
CHIEF OF PULMONARY, CRITICAL CARE, SLEEP & ALLERGY

FARM EXPOSURES



CLINICAL

INTERDISCIPLINARY CLINICS ARE POPULAR WITH PATIENTS

Many health conditions overlap into several specialties.

For patients, this can result in a myriad of doctor appointments as they bounce from specialist to specialist.

For patients, the fewer clinic visits they have to make, the better. If they can see two specialists at the same time, it can be a huge time-saver. Plus, having combined input from multiple physicians is always more beneficial to patients.

UNMC's pulmonary medicine, critical care, sleep and allergy division has created multidisciplinary clinics in four areas – rheumatology, oncology, cardiology and otolaryngology.

"Patients really like it. There's no delay – it's immediate," said Daniel Hershberger, M.D., a pulmonary medicine and critical care physician who is part of the multidisciplinary clinic with rheumatology. "They get to leave with a plan that is well thought out by multiple people."

The clinic for rheumatology/pulmonary medicine takes place twice a month on Thursday afternoons on the fifth floor of the Durham Outpatient Center. The clinic sees patients with autoimmune-related lung conditions, including rheumatoid arthritis, scleroderma and myositis.

The first time patients are seen in the clinic, they receive a comprehensive evaluation by each specialist. On follow-up visits, they often are seen by pulmonary and rheumatology at the same time. About six patients are seen in each clinic.

"Patients love to hear their doctors talk about their case," Dr. Hershberger said. "It's a very transparent process."

On the research side, the Registry for Autoimmune Lung Diseases (RALES) has evolved from the clinic – spurred by Dr. Bryant England, assistant professor in the division of rheumatology. Hundreds of patient blood samples are stored in the registry and are used to determine what treatment might work best in patients.

"We learn from each other," Dr. Hershberger said.

RESEARCH

TACKLING LUNG DISEASE RESULTING FROM FARM EXPOSURES

Lung disease is a major risk in the farming industry.

Much of the risk stems from the environmental exposures that come with swine confinement facilities, cattle feedlots and poultry plants.

The Central States Center for Agricultural Safety and Health (CS-CASH) in the UNMC College of Public Health is one of only 11 centers in the country to receive research funding to address agricultural safety and health issues.

The funding comes from the National Institute for Occupational Safety and Health, which is part of the Centers for Disease Control and Prevention.

Since 2010, CS-CASH has been receiving about $2 million per year in research funding and uses the money on a number of different projects based in seven Midwest states – Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota and South Dakota.

The Division of Pulmonary, Critical Care, Sleep and Allergy have made respiratory health the cornerstone of its research project led by Todd Wyatt, Ph.D., and Jill Poole, M.D.

"The first five years of the grant, we studied anti-inflammatory therapies," Dr. Wyatt said. "The second five years, we looked at the mechanism of lung repair." They hope to renew the grant for another five years in 2021.

Upper and lower respiratory diseases caused by farming exposures are seen in about 40-70% of farmers, Dr. Poole said, and can lead to conditions such as asthma, allergies and chronic obstructive pulmonary disease.

Symptoms include cough, shortness of breath, wheezing and sputum production, she said, and classic medications don't work for several of these symptoms.

"It can be frustrating," Dr. Poole said, "as most farmers don't wear the respiratory equipment that would help protect them from these lung exposures."

Outreach to rural communities is what separates UNMC from other centers, Dr. Wyatt said, noting that UNMC frequently connects with rural health practitioners through informative webinars.

EDUCATION

INTUBATION COURSE RAISES PROFICIENCY OF UNMC INTENSIVISTS

When patients have airway issues in the intensive care unit and require intubation, it is a high-risk situation.

"If you mess it up, the patient dies," said Rorak Hooten, M.D., who is completing the third and final year of his fellowship in the pulmonary medicine, critical care, sleep and allergy division.

Dr. Hooten has teamed with three UNMC faculty members – Craig Piquette, M.D., Tammy Wichman, M.D., and Kelly Cawcutt, M.D. – to develop a course on intubating patients in the Intensive Care Unit (ICU).

The course is broken into 10 90-minute sessions with each session involving at least two or three different cases using simulation manikin. It is required for all of UNMC's 12 fellows in the division. There are four fellows in each year of the program, and that number will increase to five per class next year.

The simulation cases run the gamut and include extremely high-risk situations such as:

+ a neck fracture requiring intubation without moving the neck;
+ a mass in the airway;
+ vomiting or bleeding in the airway; or
+ airway obstruction requiring an emergent surgery (cricothyrotomy).

Medicine is evolving. In the past, most intubations done in the ICU were performed by anesthesiologists. Now, it is becoming more common for anesthesiologists to stay in the operating room and for intensivists to handle intubations in the ICU.

UNMC intensivists performed about 30 intubations per year in the ICU in the past. Now, with the fellows trained in the intubation course, they are doing about 100 intubations per year.

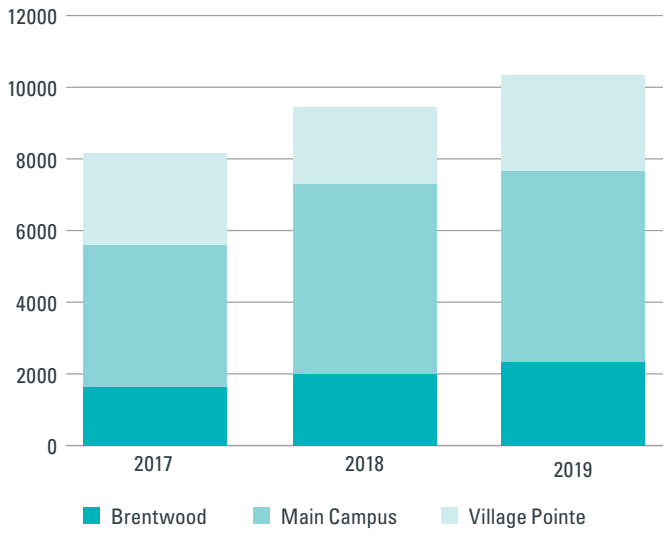
"The course has been well received. It has significantly increased our confidence level in performing intubations," Dr. Hooten said "It will continue in the future under Dr. Derek Kruse. We want our graduates to be not just competent but proficient in airway management."

DIVISION OF

RHEUMATOLOGY & IMMUNOLOGY

JAMES O'DELL, M.D.
STOKES SHACKLEFORD PROFESSOR AND VICE CHAIR, INTERNAL MEDICINE
CHIEF OF RHEUMATOLOGY

CLINIC VISITS



CLINICAL

SPECIALTY, OUTREACH CLINICS INCREASE ACCESS

In Nebraska last year, more than 14,000 patient encounters were made through UNMC's rheumatology clinics. As the largest rheumatology division in the state, UNMC continues to expand on its main clinics by providing additional care opportunities through specialty clinics for rare rheumatic diseases and outreach clinics for rural patients.

Outreach clinics in Nebraska are located in Columbus, Falls City and Wayne. In these locations, patients who would normally have to travel 100 or more miles to the UNMC main campus are provided with local care. Marcus Snow, M.D., travels to Columbus twice each month, while Alan Erickson, M.D., visits the Falls City and Wayne clinics once each month.

"In a state as large as Nebraska, access to care is a big issue for those who live in the more rural areas," Dr. Snow said. "We try to minimize this impact with our outreach clinics."

In the Omaha metropolitan area, three clinics offer care for all rheumatic diseases, while specialty clinics exist to focus on the rarest diseases. These clinics help deliver advanced diagnostics and disease management to patients with these conditions. Currently, specialty clinics exist in scleroderma, myositis and lupus. In addition, the division participates in a combined rheumatology-pulmonology clinic focusing on autoimmune lung disease and a rheumatology-dermatology clinic for autoimmune skin disease.

While all rheumatologists are trained to care for patients with the diseases studied at the specialty clinics, Dr. Snow said the focused environment allows for providers to see more of one condition and to more readily offer the latest and newest advances in treatment. Clinics with more than one specialty also provide a unique opportunity for care.

"The combined clinics allow a patient to be seen by two specialties in a single trip," Dr. Snow said. "This patient-centric set up allows close collaboration and a more coordinated approach to diagnosis and treatment."

Throughout all rheumatology clinics, patient registries are being built to develop observational studies of conditions over time. Specialty clinics also will participate in building up a bio bank containing patient serum and blood samples. The bank creates a resource for researchers that will be available for years to come to help further understand rheumatic disease.

RESEARCH

STUDIES ENHANCE TREATMENT OF RHEUMATOID ARTHRITIS, GOUT

Since 2003, Ted Mikuls, M.D., Umbach Professor of Rheumatology and vice chair for research, has led the Veterans Affairs Rheumatoid Arthritis registry (VARA). With 17 VA medical centers across the country, Dr. Mikuls and UNMC's rheumatologists created a registry of more than 2,800 U.S. veterans with rheumatoid arthritis that continues to grow and serve as a source of innovation at UNMC and beyond.

Veterans taking part in VARA allow rheumatologists to track their rheumatoid arthritis over time, as well as house their DNA and serum in a bio bank. These resources make hundreds of studies into rheumatoid arthritis possible, leading to published works and presentations at scientific meetings internationally. VARA experts also come together each year in Omaha to discuss work being done and how to improve the program in the future.

Another study, led by UNMC rheumatology in collaboration with the VA, is focused on gout treatment.

In the ongoing multicenter study, UNMC and participating VA medical centers will compare the effectiveness of two first-line drugs used to treat gout, which is caused by high levels of uric acid in the blood. The two drugs – Allopurinol and Febuxostat – work to lower those levels, but Febuxostat is more expensive than Allopurinol.

In the randomized, double-blinded study, the drugs are titrated to reach the desired uric acid level instead of comparing singular fixed doses side by side. The more than 900 patients enrolled in the study are followed for 72 weeks to determine whether there is a difference in treatment outcomes.

Dr. Mikuls believes the drugs will work the same and show patients evidence that a cheaper treatment is just as effective.

"The end goal is always to learn more about our patients," Dr. Mikuls said. "We want to ensure they achieve the best outcomes possible, and we have seen advances that show we're working closer to that goal."

EDUCATION

STUDENTS ENERGIZED BY LIVE PATIENT EXPERIENCE

Millennials who walk the halls of the UNMC College of Medicine have grown up with cutting-edge technology all around them – much of it being integrated into their education. But for these medical students, technological education methods have shown little evidence of effectiveness when compared to traditional learning formats.

Because of this, Amy Cannella, M.D., associate professor of internal medicine, and her colleagues decided to cut the proverbial cord to implement a hands-on approach for first- and second-year medical students with the Live Patient Experience (LPE).

LPE allows medical students to apply what they're learning in the classroom to real patients early in their careers. This format challenges both recent educational innovations and traditional timelines. In the past, students didn't have real patient encounters – outside of shadowing experiences – in their first semester of medical school.

The half-day experience brings patients with various rheumatic diseases into the classroom to interact with students. Small groups meet with each patient and a rheumatologist for 15 minutes to learn about their conditions and build upon the knowledge gained from the classroom.

Patients participating in LPE have elements of their record, such as X-ray or pathology images, on a screen in the room. Patients are invited by their rheumatologist to participate, and after their first experience, most look forward to coming back the next year.

In thank-you letters to participants, Dr. Cannella includes messages from students about their appreciation for the patients in the program.

"This was easily the best day of medical school and potentially my life," one student wrote. "It's reenergizing for us to see real patients and be able to apply knowledge."

LPE differs from other innovative modalities in education and resonates with students because it not only promotes application of educational objectives but also fosters professional development and interpersonal skills. In an age of technological clutter, LPE is taking things back to basics.

HIGHLIGHTS ON

VICE CHAIRS

JAMES O'DELL, M.D., serves as Stokes-Shackleford Professor, chief of the division of rheumatology and vice chair for education in the department of internal medicine. He recently stepped down as director of the UNMC Internal Medicine Residency Program after 35 years. Dr. O'Dell earned his medical degree and completed his internal medicine residency at UNMC. He completed a clinical and research fellowship in rheumatology at the University of Colorado Health Sciences Center, Denver, and is board certified in both internal medicine and rheumatology. He is founder and director of the nationally recognized Rheumatoid Arthritis Investigational Network, a collaboration of rheumatologists from eight states that conducts investigator-initiated trials seeking improved treatments for rheumatoid arthritis (RA). His research centers on the development of multi-centered, non-industrial clinical trials that are designed to answer clinically relevant therapeutic questions. Through 1996 and 2013 New England Journal of Medicine publications, he popularized combination therapy for RA. Active with the American College of Rheumatology (ACR), Dr. O'Dell is past president of the Research and Education Foundation and served as president in 2011-2012. He is a master of both the ACP and ACR and was awarded the UNMC Varner Educator Laureate American College of Physicians Award in 2019.

TED MIKULS, M.D., M.S.P.H., is the Umbach Professor in the division of rheumatology and immunology and serves as vice chair for research for the department of internal medicine. He received his medical degree from the UNMC in 1995. Dr. Mikuls completed his internal medicine residency at UNMC where he served as chief medical resident. He completed his rheumatology fellowship training at the University of Alabama at Birmingham (UAB), where he also received his master's of science in public health. Dr. Mikuls joined the UNMC rheumatology division in 2002, where he remains active in clinical research, research mentoring, education and patient care. He has directed the VA Nebraska-Western Iowa Health Care System Rheumatoid Arthritis Clinic for the past 17 years. Dr. Mikuls' research focuses on the etiopathogenesis and health outcomes in rheumatoid arthritis and gout. He initiated and has led the multicenter VA Rheumatoid Arthritis Registry since its inception in 2002. He has received research funding from the VA, NIH, Arthritis Foundation, the U.S. Department of Defense, industry and the Rheumatology Research Foundation.

ANGELA PEPPERS serves as vice chair for administration and finance in the UNMC Department of Internal Medicine, where she has served as department administrator since 2014. Peppers earned her master's degree in business administration from Creighton University and her bachelor's of science in business administration, finance, at the University of Nebraska at Omaha. She previously held the position of financial executive at Children's Specialty Physicians and Children's Physicians in Omaha, Nebraska. At Creighton University, she held the positions of associate dean for finance and administration and financial officer at the School of Law, director of financial affairs at the School of Medicine and administrator of the department of pediatrics.

THOMAS TAPE, M.D., is chief of the division of general Internal medicine and professor and vice chair for clinical activity in the department of internal medicine. He received his medical degree from Washington University Medical School, St. Louis, Missouri., and did his medicine residency and general internal medicine fellowship at Strong Memorial Hospital, University of Rochester, New York. He is certified by the American Board of Internal Medicine. Dr. Tape is chair emeritus of the Board of Regents of the American College of Physicians (ACP). He been awarded mastership from the ACP, fellowship from the Royal College of Physicians (London) and an honorary fellowship from the Royal College of Physicians of Thailand. He speaks often on the drivers and implications of health care reform. His research interests are in the areas of physician judgment and decision-making and evidence-based clinical practice. He has written more than 60 papers in peer-reviewed journals and a dozen chapters — primarily in medical education books. He co-edited the ACP book, *Diagnostic Strategies for Common Medical Problems*. He also is credited as the co-developer of six medical education computer programs.

ROSLYN BERNSTEIN MANNON, M.D., recently recruited to UNMC, serves as vice chair of research mentoring and academic development for the department, as well as, associate chief for research in the division of nephrology and professor of medicine. She received her medical degree from Duke University School of Medicine, completed her internship and residency in internal medicine, served as chief resident and completed her nephrology training. She is board certified in internal medicine and nephrology.

HIGHLIGHTS ON

ASSOCIATE CHAIRS

KRISTINA BAILEY M.D., ATSF, is an associate professor in the division of pulmonary, critical care, sleep and allergy, joining the faculty in 2008. She serves as the associate vice chair of research, focusing on basic science research within the department. A physician/scientist, Dr. Bailey completed her medical training, internal medicine residency and pulmonary critical care fellowship at UNMC. She completed an extra year of basic science research training during her fellowship and was funded by a competitive F32 National Research Service Award from the National Institute on Alcohol Abuse and Alcoholism. As part of her clinical duties, she serves the veteran population as a staff physician/pulmonologist at the Omaha VA Medical Center. Dr. Bailey's research focuses on how exposures such as heavy alcohol intake, smoking, organic dust exposures, cannabis use and aging affect pulmonary innate immunity and increase the risks of pneumonia. Since her fellowship, Dr. Bailey's work has been funded by a K award, and, more recently, an R01, both through the National Institutes of Health. With departmental support, she initiated and coordinates a lung tissue biorepository. She was in the inaugural class of American Thoracic Society Fellows and is active in the American Thoracic Society, where she was elected to the international conference committee and serves as the chair of the program committee of the environmental, occupational and population health assembly.

RENÉE HILL, J.D., MBA, CRA, CRCR, CSB, serves as associate vice chair for research administration and development for the UNMC Department of Internal Medicine. Hill joined the department in 2018 and has worked in academic medicine administration and research development for more than 13 years. She has served as director of research services for the University of Texas at San Antonio's College of Sciences, as program manager for the San Antonio Claude D. Pepper Older Americans Independence Center at the University of Texas Health Science Center at San Antonio, and as division administrator for the Renal-Electrolyte Division at the University of Pittsburgh School of Medicine's Department of Medicine. Hill received a J.D. degree from Fordham University School of Law, an MBA degree from New York University's Stern School of Business and an AB from Harvard and Radcliffe Colleges. She previously has practiced law as a government litigator and has worked in the financial services industry.

MATTHEW LUNNING D.O., FACP, is an associate professor in the division of oncology and Hematology and was recently appointed as an associate vice chair of research for the department of internal medicine and medical director of the Clinical Research Center (CRC). Dr. Lunning received his medical degree from Des Moines University in 2006. He completed his internal medicine residency at UNMC, where he served as chief medical resident. He completed his hematology/oncology fellowship and served as the hematology chief fellow at Memorial Sloan-Kettering Cancer Center. Dr. Lunning returned to UNMC in 2013 and has been active in clinical research, research mentoring, education and patient care. He received UNMC's Distinguished Scientist Award in 2019. Dr. Lunning has served on several National Comprehensive Cancer Network's guidelines committees, including the Immunotherapy Toxicity & T-Cell Lymphoma Panels. He has served as an invited member of the American Society of Clinical Oncology's Cancer Education Committee on the Non-Hodgkin Lymphoma. He is the co-organizer of the Pan Pacific Lymphoma Conference

CHIEF RESIDENTS & GRADUATES

CHIEF RESIDENTS 2019-2020

Mollie Brittan, M.D.
VA CHIEF RESIDENT
UNMC/OMAHA VA, OMAHA, NEB.

Kate-Lynn Muir, D.O.
VA QUALITY & PATIENT SAFETY CHIEF RESIDENT
UNMC/OMAHA VA, OMAHA, NEB.

Tate Johnson, M.D.
UNMC CHIEF RESIDENT
UNMC, OMAHA, NEB.

Jill Wagoner, M.D.
AMBULATORY CHIEF RESIDENT
UNMC/OMAHA VA, OMAHA, NEB.

GRADUATES, CLASS OF 2019

Annie Braseth, M.D.
GASTROENTEROLOGY FELLOWSHIP
UNIVERSITY OF IOWA, IOWA CITY, IOWA

Sarah Cameron, M.D.
HOSPITALIST
NEBRASKA MEDICINE, OMAHA, NEB.

Andrew Canning, M.D.
GASTROENTEROLOGY FELLOWSHIP
EAST TENNESSEE STATE UNIVERSITY, JOHNSON CITY, TENN.

Jared Drenkow, M.D.
HOSPITALIST
FROEDTERT & MEDICAL COLLEGE OF WISCONSIN
COMMUNITY PHYSICIANS
MENOMONEE FALLS & WEST BEND, WIS.

Brett Henderson, D.O.
GASTROENTEROLOGY FELLOWSHIP
UNMC, OMAHA, NEB.

Tyler Hitchler, M.D.
HOSPITALIST
GOOD SAMARITAN HOSPITAL, KEARNEY, NEB.

Katherine Maliszewski, M.D., Ph.D.
GERIATRICS FELLOWSHIP & HOSPITALIST
UNMC & NEBRASKA MEDICINE, OMAHA, NEB.

Maureen McElligott, M.D.
PULMONARY & CRITICAL CARE FELLOWSHIP
UNMC, OMAHA, NEB.

Edin Pujagic, D.O.
INFECTIOUS DISEASES FELLOWSHIP
UNIVERSITY OF IOWA, IOWA CITY, IOWA

Jarin Redman, M.D.
HOSPITALIST
VIA CHRISTI HOSPITAL, PITTSBURG, KAN.

Jake Riggle, M.D., Ph.D.
PULMONARY & CRITICAL CARE FELLOWSHIP
UNIVERSITY OF KANSAS, KANSAS CITY, KAN.

Smitha Sagaram, M.B.B.S., M.S., M.P.H.
HEMATOLOGY & ONCOLOGY FELLOWSHIP
UNIVERSITY OF MINNESOTA, MINNEAPOLIS, MINN.

Lauren Shoemaker, M.D.
TRADITIONALIST
METHODIST PHYSICIANS CLINIC HEALTHWEST, OMAHA, NEB.

Jesse Souchek, M.D.
HOSPITALIST
METHODIST HEALTH SYSTEMS, OMAHA, NEB.

Brett Van Briggle, M.D.
CARDIOLOGY FELLOWSHIP
UNMC, OMAHA, NEB.

Laura Vance, D.O.
HOSPITALIST
NEBRASKA MEDICINE, OMAHA, NEB.

Nicholas Wilka, M.D.
HOSPITALIST
METHODIST HEALTH SYSTEMS, OMAHA, NEB.

FACULTY & KEY INTERESTS

CARDIOVASCULAR MEDICINE

DANIEL R. ANDERSON, M.D., PH.D.
Associate Professor
Chief, Cardiovascular Medicine
+ Innate immunity
+ Protein adduction
+ Arrhythmogenesis
+ Cardiovascular inflammation

DAVID BARTON, M.D.
Assistant Professor
Associate Program Director, Interventional Cardiology Fellowship
+ Complex coronary interventions
+ Transcatheter aortic valve replacement
+ Coronary microvascular disease
+ Pulmonary balloon angioplasty

HESHAM BASMA, PH.D., R.P.
Instructor
+ Impact of TGF-ß on fibroblasts
+ E-cigarette toxicity

WILLIAM PAUL BIDDLE, M.D.
Associate Professor
+ General consultative cardiology
+ Cardio-oncology
+ Complex coronary disease

ADAM BURDORF, D.O.
Assistant Professor
Associate Program Director, Cardiovascular Disease Fellowship
Medical Director, Cardiovascular Progressive Care Unit
+ Advanced heart failure
+ Heart transplantation
+ Mechanical circulatory support

WARD CHAMBERS, M.D.
Professor
+ General consultative cardiology
+ Cardio-oncology

YIANNIS CHATZIZISIS, M.D., PH.D.
Associate Professor
Director, Cardiovascular Biology and Biomechanics Laboratory
Clinical Medical Director, Heart and Vascular Unit
Clinical Medical Director, Cardiac Cath Lab
+ High-risk PCI
+ Intracoronary imaging
+ Atherosclerosis
+ Vascular biology and biomechanics

MARTINA A. CLARKE, PH.D., MSHI
Assistant Professor
+ Human-computer interaction
+ Cognitive load
+ Health literacy
+ User-centered design

DAHN L. CLEMENS, PH.D.
Associate Professor
+ Molecular biology
+ Protein modifications
+ Oxidative stress
+ Mitochondrial dysfunction

JONATHAN W. CRAMER, M.D.
Associate Professor; Pediatrics & Internal Medicine
Medical Director, Adult Congenital Heart Disease Program
+ Transition from pediatric cardiology to adult cardiology
+ Simple and complex congenital heart disease
+ Congenital heart disease surgical outcomes
+ Complex cardiac imaging

BIN DUAN, PH.D.
Assistant Professor
+ Biomaterials and biotechnology development
+ Tissue regeneration
+ Stem cell engineering

ARTHUR EASLEY, JR, M.D.
Associate Professor
Program Director, Cardiovascular Disease Fellowship
+ Cardiac electrophysiology
+ Fellowship education and program development

KIRAN GANGAHAR, M.D.
Assistant Professor
Medical Director, Cardiac Prevention
+ Heart disease prevention
+ Cardiac imaging
+ Lipid management

ANDREW GOLDSWEIG, M.D.
Assistant Professor
Associate Medical Director, Structural Heart Disease
+ Structural heart interventions
+ Database outcome research
+ Structural heart clinical trials

REBEKAH L. GUNDRY, PH.D.
Professor and Vice Chair, Cellular and Integrative Physiology
Assistant Chief, Basic and Translational Research, Cardiovascular Medicine
Director, CardiOmics Program
+ Mass spectrometry
+ Cell surface glycoproteins
+ Heart failure

JOHN HAAS, M.D.
Assistant Professor
Clinical Medical Director, Heart Center
+ Pharmacy and therapeutics in cardiovascular medicine
+ Cardiac rehabilitation
+ Regulatory affairs

JOHN V. HIGGINS, M.D.
Assistant Professor
Associate Program Director, Cardiovascular Disease Fellowship
+ Advanced cardiac imaging, including cardiac CT and MRI
+ Preventive cardiology, including advanced lipidology
+ Structural and interventional echocardiography

MARSHALL HYDEN, M.D.
Assistant Professor
Assistant Medical Director, Heart Transplantation
+ Heart transplantation
+ Mechanical circulatory support

FARIS KHAN, M.D., M.S., FACC, FHRS
Assistant Professor
Associate Program Director, Clinical Cardiac Electrophysiology Fellowship
+ Ablation-Complex Arrhythmias
+ Zero Fluoroscopy Ablations
+ Laser Lead Extractions
+ Outcomes based research

XIANGDE (MARTIN) LIU, M.D., PH.D.
Assistant Professor
+ In vitro study of tissue injury and repair
+ Chronic inflammation and atherosclerosis

BRIAN LOWES, M.D., PH.D.
William D. Angle Presidential Chair of Cardiology
Clinical Medical Director, Heart Transplant
+ Cardiac transplant
+ Mechanical circulatory support
+ Molecular targets for heart failure therapies

SUDHEER KUMAR PABBISETTY, PH.D.
Instructor
+ Cardiovascular inflammation
+ Lymphocyte trafficking
+ Atherosclerosis
+ Adaptive immunity

EDWARD O'LEARY, M.D., MBA
Associate Professor
Program Director, Interventional Cardiology Fellowship
Associate Medical Director, Cardiac Cath Lab
+ Complex and high risk coronary interventional procedures
+ Intracoronary imaging
+ Transcatheter aortic valve replacement
+ Cardiovascular educational (VR/AR) development

GREGORY PAVLIDES, M.D., PH.D.
Professor
Vincent Miscia Chair of Interventional Cardiology
+ Complex PCI
+ Acute coronary syndromes
+ TAVR
+ Transcatheter mitral valve intervention

JASON J PAYNE, M.D.
Assistant Professor
+ Complex ablation
+ Cardiac resynchronization therapy
+ Sudden cardiac death

THOMAS PORTER, MD
Professor
Theodore F. Hubbard Distinguished Chair of Cardiology
+ Ultrasound and contrast microbubbles in diagnostic and therapeutic applications
+ Advanced cardiac imaging

SAMER SAYYED, MD
Associate Professor
Ward Chambers Professor of Cardiology
Medical Director, Non-Invasive Cardiovascular Services
Medical Director, Echocardiography Lab
+ Advanced cardiac imaging
+ Cardiology instruction

J. WILLIAM SCHLEIFER, M.D.
Assistant Professor
Clinical Medical Director, Noninvasive Cardiology
+ ECG interpretation and education
+ Complex catheter ablation of arrhythmias
+ Pacemaker and ICD implantation and extraction
+ Left atrial appendage occlusion

DOUGLAS STOLLER, M.D.
Assistant Professor
Medical Director, Cardiovascular Genetics Program
Medical Director, Heart Failure Research
+ Cardiac genetics
+ Heart transplant
+ Advanced heart failure
+ Transplant coronary artery disease

JEREMY STONE
Assistant Professor
+ Advanced cardiac imaging
+ Cardio-oncology

SHANE TSAI, MD
Associate Professor
Program Director, Cardiac Electrophysiology Fellowship
Medical Director, Electrophysiology Lab
+ Advanced ablation
+ Adult congenital heart disease
+ Remote cardiac device monitoring

POONAM VELAGAPUDI, M.D., M.S., FACC
Assistant Professor
Associate Program Director, Cardiovascular Disease Fellowship
+ High-risk PCI in complex CAD
+ Transcatheter therapies (TAVR, TMR, MitraClip)

JOHN R. WINDLE M.D.
Professor
Richard and Mary Holland Distinguished Chair of Cardiovascular Medicine
Director, Center for Intelligent Health Care
+ Optimizing the usability of health information technology
+ Improving the quality of clinical data
+ Improving human cognition and artificial intelligence in clinical care

FENG XIE, MD
Professor
+ Ultrasound and contrast microbubbles research
+ Translation of echocardiography guidelines for Chinese implementation

ANJI YETMAN, M.D.
Professor
Program Director, Adult Congenital Cardiology Fellowship
Medical Director, Aortic Diseases Programs
+ Adult congenital heart disease
+ Turner Syndrome
+ Heart disease in pregnancy
+ Aortic aneurysmal disease

RONALD ZOLTY, M.D., PH.D.
Professor
Program Director, Advanced Heart Failure Fellowship
Co-Director of Clinical Cardiovascular Research
+ Pulmonary hypertension
+ Cardiac transplant mechanical circulatory support
+ Heart failure
+ Invasive hemodynamics with exercise challenges

DIABETES ENDOCRINOLOGY & METABOLISM

PADMAJA AKKIREDDY, M.B.B.S.
Assistant Professor
+ Diabetes Technology
+ Medical weight loss
+ Thyroid disorders

ROBERT BENNETT, PH.D.
Professor
+ Relaxin functionsin organ damage
+ Cardiovascular disease and diabetes
+ Retinoids and insulin resistance

BRIAN P. BOERNER, M.D.
Assistant Professor
+ Post-transplant diabetes and transplant endocrinology
+ Pancreatogenic diabetes
+ Medical education

CYRUS DESOUZA, M.B.B.S.
Professor
Division Chief
+ Cardiovascular disease in diabetes
+ Endothelial dysfunction in diabetes
+ Mental health and apathy in diabetes

ANDJELA DRINCIC, M.D.
Professor
+ Pituitary disorders and tumors
+ Neuroendocrinoloty
+ Adrenal dysfunction

LESLIE A. EILAND, M.D.
Assistant Professor
+ Telemedicine and rural health
+ Diabetes technology
+ Thyroid disorders

WHITNEY GOLDNER, M.D.
Professor
+ Thyroid nodules and cancer
+ Neuroendocrine tumors
+ Thyroid and parathyroid disorders

LAURA A. GRAEFF-ARMAS, M.D.
Associate Professor
+ Osteoporosis
+ Bone disease in chronic kidney disease
+ Bone disease in diabetes

FREDERICK HAMEL, PH.D.
Professor
+ Function of insulin-degrading enzyme
+ Signal transduction in insulin action
+ Etiology of type 2 diabetes mellitus

ANUPAM KOTWAL, M.B.B.S.
Assistant Professor
+ Thyroid nodules and thyroid cancer
+ Diabetes
+ Thyroid, parathyroid, adrenal and pituitary disorders

JENNIFER LARSEN M.D.
Professor
+ Nontraditional risk factors for vascular disease after kidney transplant
+ Primary prevention of diabetes and its complications
+ Improving outcomes after solid organ transplant

LYNN R. MACK, M.D.
Associate Professor
+ Osteoporosis evaluation and management
+ Diabetes care in pregnancy and cystic fibrosis
+ Women's health with thyroid disease and PCOS

AMY S. NEUMEISTER, M.D.
Assistant Professor
+ Type 1 and Type 2 diabetes
+ Thyroid, pituitary adrenal disease
+ Clinical medical education

VIJAY SHIVASWAMY, M.B.B.S.
Associate Professor
+ Immunosuppressants and insulin resistance
+ Post-transplant diabetes and endocrine care
+ Reproductive function after transplantation

SARASWATHI VISWANATHAN, PH.D.
Associate Professor
+ Obesity-linked insulin resistance
+ Alcohol-associated liver disease
+ Altered metabolism in pancreatic cancer

RITIKA PURI, M.B.B.S.
Assistant Professor
+ Thyroid disorders
+ Lipid management
+ Cardiovascular disease in diabetes

GASTROENTEROLOGY & HEPATOLOGY

MADAM KUMAR ARUMUGAM, PH.D.
Postdoctoral Researcher

ISHFAQ BHAT, M.D.
Assistant Professor
Associate Program Director, GI Fellowship
+ Specialty endoscopy
+ Endoscopy and education
+ Inflammatory bowel disease

CAROL CASEY, PH.D.
Professor
+ Alcoholic liver injury
+ Cell biology and function

RAGHUBENDRA DAGUR, PH.D.
Instructor
+ Extracellular vesicles role in HIV-1
+ Hepatitis co-infections in liver pathogenesis
+ Alcoholic liver disease; drugs of abuse and potentiation of HIV infection in brain and liver diseases

TERRENCE DONOHUE JR, PH.D.
Professor
+ Alcoholic liver injury
+ Hepatocyte proliferation and repair

CHIJIOKE ENWELUZO, M.B.B.S.
Instructor
+ Education
+ Quality improvement

MURALI GANESAN, PH.D.
Assistant Professor
+ Effect of alcohol in HBV infection pathogenesis
+ Mechanisms of HIV induced liver injury; role of alcohol
+ Mechanisms of alcohol and HCV induced liver injury

ALEXANDER HEWLETT, D.O.
Associate Professor
Director, Motility and GI Fellowship Program
+ Esophageal motility disorders
+ Fellowship education

KUSUM KHARBANDA, PH.D.
Professor
+ Alcoholic liver disease
+ Bioprotection in hepatitis

TIMOTHY MCCASHLAND, M.D.
Professor
Medical Director, Liver Transplantation
+ Liver transplantation
+ Cholestatic liver disease

BENITA MCVICKER, PH.D.
Associate Professor
+ Alcoholic liver disease
+ Hepatocyte apoptosis

MARCO OLIVERA-MARTINEZ, M.D.
Professor
Director, Liver Transplant and Hepatology Fellowship Program
+ Liver transplantation
+ Chronic viral hepatitis
+ Novel pharmacologic therapies

NATALIA OSNA, PH.D.
Associate Professor
+ Hepatitis C
+ Hepatic inflammation

FEDJA ROCHLING, M.B.B.C.H.
Associate Professor
Interim Division Chief
+ Transplant hepatology
+ Hepatocellular carcinoma
+ Short bowel syndrome
+ Intestinal rehabilitation

GENERAL INTERNAL MEDICINE & HOSPITAL MEDICINE

NURLAN ALIYEV, M.D.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

NATHAN M. ANDERSON, M.D.
Assistant Professor
Director, Junior Clerkship
+ Student and resident education
+ Outpatient primary care
+ Hospital medicine

JOEL D. ARMITAGE, M.D., F.A.C.P.
Assistant Professor
Medical Director, Village Pointe Health Center
+ Outpatient primary care
+ Disease prevention and health promotion
+ Delegate academic advisory board, ACP

MICHAEL A. ASH, M.D., R.P.H.
Assistant Professor
Chief Transformation Officer, Nebraska Medicine
Vice Chancellor of Information Technology, UNMC
+ Medical informatics

ALLISON K. ASHFORD, M.D., F.A.C.P., F.A.A.P., F.H.M.
Assistant Professor
Director, Internal Medicine – Pediatrics Residency Program
+ Med peds
+ Hospital medicine
+ Resident and medical student education

MICAH W. BEACHY, D.O., F.A.C.P., S.F.H.M.
Associate Professor
Medical Director, Clinical Effectiveness, Nebraska Medicine
+ Medical management of the hospitalized patient
+ Incorporation of high value care into clinical decision making
+ Quality improvement and patient safety

ROMANA A. BHAT, M.D.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

JUSTIN R. BIRGE, M.D., M.S., F.H.M.
Assistant Professor
Medical Director, Provider Informatics
+ Hospital medicine
+ Medical management of the hospitalized patient

SHANNON K. BOERNER, M.D., F.A.C.P.
Assistant Professor
Director, Faculty Mentoring and Development, Internal Medicine
+ Women's health
+ Outpatient primary care

ANDREW S. BROUWER, M.D.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

BRADY P. BULIAN, D.O.
Assistant Professor
+ Documentation quality
+ Workflow efficiency
+ Informatics

SARAH L. CAMERON, M.D.
Assistant Professor
+ Hospital Medicine
+ Medical management of the hospitalized patient

JAMES CAMPBELL, M.D., F.A.C.P.
Professor
+ Computerized patient medical records
+ Clinical decision support systems
+ Primary outcomes research

JODI L. CANTRELL, M.D.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

KRISTY J. CARLSON, PH.D.
Instructor
Research Coordinator
+ Hospital medicine
+ Medical management of the hospitalized patient

JENNIFER S. CASPARI, PH.D., L.I.M.F.T.
Assistant Professor
Director, Behavioral Medicine, General Internal Medicine
+ Resident wellness program development
+ Medical family therapy
+ Brief psychosocial interventions

KELLY J. CAVERZAGIE, M.D., F.A.C.P., F.H.M.
Professor
Vice President, Education, Nebraska Medicine
+ Education redesign
+ Health systems sciences
+ Physician advocacy

AMY L. COFFEY, M.D.
Instructor
+ Hospital medicine
+ Medical management of the hospitalized patient

JENNIFER E. COLELLA, M.D.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

BRENT A. CROUSE, M.D.
Assistant Professor
+ Outpatient primary care
+ Cardiology and diabetes care

NATALIE S. CRUMP, M.B.B.S.
Assistant Professor
+ Hospital medicine
+ Post-discharge hospital medicine clinic
+ Safe and efficient hospital medication reconciliation

ERIK T. EHLERS, M.D.
Instructor
+ Outpatient primary care
+ Resident education and training

GALE M. ETHERTON, M.D., F.A.C.P.
Associate Professor
VA NWI Associate Chief of Staff for Patient Safety
+ Hospital delivery systems
+ Physician quality improvement
+ Patient safety

JULIE L. FEDDERSON, M.D.
Assistant Professor
Chief Patient Safety and Compliance Officer, Nebraska Medicine
+ Hospital medicine
+ Medical management of the hospitalized patient

KARISA L. HAJEK, M.D.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

SEHR HAROON, M.D.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

STEPHANIE J. HARTMAN, M.D.
Assistant Professor
+ Women's health
+ Outpatient primary care

EMILY E. HOWARD, D.O.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

EMILY K. HILL BOWMAN, M.D.
Assistant Professor
+ Outpatient primary care
+ Resident training and education

RANDA A. JABER, M.B.B.C.H.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

MARY GALLAGHER JANSEN, M.D., F.A.C.P.
Assistant Professor
+ Psychiatric illness in primary care
+ Medical education

DANIEL J. JEFFREY, M.D.
Assistant Professor
Medical Director, Fontenelle Health Center
+ Med peds
+ Transitional care
+ Patient centered medical home

JESSIE S. JENKINS, M.D.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

MICHELLE F. JOHNSON, M.D.
Assistant Professor
+ Outpatient primary care
+ Preventive cardiology

VASTHALA JUVVIGUNTA, M.B.B.S.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

LYDIA Y. KANG, M.D., F.A.C.P.
Assistant Professor
+ Palliative care
+ Doctor patient communication
+ Medical humanities

MUHAMMED Z. KHAN SUHEB, M.B.B.S.
Assistant Professor
+ Hospital medicine
+ Perioperative care and risk assessment
+ Research activities

ARTHUR F. KORNITSKY, D.O.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

TREK C LANGENHAN, M.D.
Assistant Professor
Assistant Program Director, Internal Medicine Residency Program
+ Student and resident education
+ Medical management of the hospitalized patient

JOSHUA M. LAURILA, D.O.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

CHETAJ A. MAHABIR, M.D.
Instructor
+ Hospital medicine
+ Medical management of the hospitalized patient

KATHERINE L. MALISZEWSKI, M.D., PH.D.
Instructor
+ Hospital medicine
+ Medical management of the hospitalized patient

EAMON P. MALONEY, M.D.
Assistant Professor
+ Outpatient primary care
+ Med peds

KARA J. MARKIN, M.D.
Assistant Professor
+ Outpatient primary care
+ Women's health
+ Lifestyle medicine

TABATHA HOLTZ MATTHIAS, D.O., M.B.A., F.A.C.P.
Assistant Professor
+ Hospital medicine clinical operations
+ Triage and external transfer processes
+ Point-of-care ultrasound

MERLE T. MCALEVY, M.D.
Assistant Professor
+ Student education
+ Physical diagnosis teaching

KERRY A. MCDONALD, M.D.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

SCOTT MENOLASCINO, M.D.
Assistant Professor
+ Resident training and education
+ Emergency medicine

ELIZABETH M. MILES, M.D.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

KHURRAM MIRZA, M.B.B.S.
Assistant Professor
+ Inpatient geriatrics care
+ Improve hospital outcome of elderly patients
+ Quality improvement

CHRISTINE A. MITCHELL, M.D., F.A.C.P.
Instructor
+ Outpatient primary care
+ Resident training and education

H. LARRY MITCHELL, M.D.
Assistant Professor
Associate Program Director, Internal Medicine Residency Program
+ Outpatient primary care
+ Resident training and education

STEPHEN M. MOHRING, M.D.
Assistant Professor
Medical Director, Midtown Health Center
Medical Director, PCMH and Population Health, Nebraska Medicine
+ Outpatient primary care
+ Resident and student training and education

URMILA MUKHERJEE, M.D.
Assistant Professor
+ Hospital medicine
+ Surgical co-management
+ Quality improvement and patient safety

CHELSEA R. NAVARRETTE, M.D.
Assistant Professor
+ Hospital medicine
+ Outpatient primary care
+ Management of the hospitalized patient

J. SCOTT NEUMEISTER, M.D., F.A.C.P.
Associate Professor
+ Procedural training
+ Undergraduate and graduate medical education

DEVIN R. NICKOL, M.D., F.A.C.P.
Associate Professor
Assistant Dean, Interprofessional Education
Core Director, M1 Integrated Clinical Experience
Director, M2 Physical Diagnosis Course
+ Teaching evidence-based medicine
+ Computers in medical education
+ Interprofessional education

DAVID O'DELL, M.D., F.A.C.P.
LeeRoy Meyer Professor
Residency Director, Primary Care
+ Medical student procedural training
+ Undergraduate and graduate medical education

JENNIFER R. PARKER, M.D., F.A.A.P., F.A.C.P.
Associate Professor
+ Outpatient primary care
+ Resident training and education
+ Transition care

NICOLLE L. PETERSON, D.O.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

MAHLIQHA QASIMYAR, M.D.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

ERIN RAMELB, M.D.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

SARAH E. RICHARDS, M.D.
Assistant Professor
Medical Director, Patient and Provider Experience, Nebraska Medicine
+ Patient experience
+ Provider wellbeing
+ Hospital medicine

KHALID M. SAHAK, M.D.
Assistant Professor
+ Point-of-care ultrasound
+ Surgical co-management

ROBERT SCHWAB, M.D.
Assistant Professor
+ Resident education

SUSAN R. SCHWERDTFEGER, M.D.
Assistant Professor
Medical Director, Brentwood Health Center
+ Outpatient primary care
+ Women's health

SMRITI I. SHARMA D.O.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient
+ Oncology co-management

CORY E. SHIELD, D.O.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

JASON F. SHIFFERMILLER, M.D., M.P.H.
Assistant Professor
+ Hospital medicine
+ Perioperative medicine
+ Inpatient outcomes and database research

CHRISTOPHER J. SMITH, M.D.
Assistant Professor
+ Point-of-care ultrasound
+ Medical education
+ Transitions of care

MICHAEL P. SMITH, M.D.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

SARAH E. SMITH, M.D.
Assistant Professor
+ Med peds
+ Outpatient primary care

ASHIMA SRIVASTAVA, M.D.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

THOMAS TAPE, M.D., M.A.C.P., F.R.C.P.
Professor
Division Chief
Vice Chair, Clinical Activity, Internal Medicine
Chair Emeritus, Board of Regents, ACP
+ Health care policy
+ Medical judgment and decision making

REGAN M. TAYLOR, M.D., F.A.C.P.
Assistant Professor
Medical Director, Internal Medicine, Olson Center for Women's Health
+ Women's health
+ Resident and medical student education
+ Outpatient primary care

MELISSA L. TEPLY, M.D.
Assistant Professor
+ Outpatient primary care
+ Palliative medicine

JEAN L. THIERFELDER, M.D., F.A.C.P.
Associate Professor
Medical Director, General Internal Medicine DOC
+ Organization of outpatient care
+ Preventive care
+ Travel medicine

JORDAN L. TICHENOR, D.O., M.B.A.
Assistant Professor
+ Outpatient primary care
+ Healthcare prevention

MANISH M. TIWARI, M.D., PH.D., M.P.H.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

DIANE N. TOPOLSKI, M.D.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

MARTINE N. TROY, M.D.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

LAURA M. VANCE, D.O.
Assistant Professor
+ Hospital medicine triage
+ Fatty liver disease
+ Medical education

ANDREW J. VASEY, M.D., F.A.C.P.
Assistant Professor
Physician Leader, Primary Care Clinical Program, Nebraska medicine
+ Outpatient primary care
+ Medical student and resident education
+ Perioperative, consultative and hospital medicine

CHAD W. VOKOUN, M.D.
Associate Professor
Chief, Hospital Medicine, General Internal Medicine
Associate Director, Internal Medicine Residency Program
+ Hospital medicine
+ Resident training and education
+ Perioperative and consultative medicine

SRINIVAS R. VUNNAM, M.B.B.S.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

NICHOLAS A. WEILAND, D.O.
Assistant Professor
+ Hospital medicine
+ Medical management of the hospitalized patient

NOAH A. WIEDEL, M.D.
Assistant Professor
+ Treatment of C difficile, including FMT
+ Reducing length of admission
+ Cost conscious health care

ROBERT WIGTON, M.D., F.A.C.P.
Professor
Assistant Dean Special Projects
+ History of the college of medicine
+ Research in medical education
+ Research in physician judgement and decision making

TESIA S. WINTER, D.O.
Assistant Professor
+ Outpatient primary care
+ Hospital medicine
+ Resident and medical student education

RAE A WITT, M.D.
Assistant Professor
Associate Director, Internal Medicine Residency Program
+ Hospital Medicine
+ Resident education

RENEE M. WOEHRER, M.D., F.A.C.P.
Assistant Professor
Associate Chief of Staff for education VA Nebraska Western Health Care System
+ VA ACOS education
+ Resident and medical student teaching

JILL M. ZABIH, M.D.
Assistant Professor
+ Preparing students for residency
+ Simulation in medical education
+ Understanding social determinants of health

GERIATRICS & GERONTOGOGY

KARINA I. BISHOP, M.D., C.M.D.
Assistant Professor
Medical Director, Douglas County Health Center
+ Geriatric primary care
+ Care of Spanish-speaking older adults
+ Medical direction of post-acute and long-term care facilities

STEPHEN J BONASERA, M.D., PH.D.
Associate Professor
+ Neurobiology of normal aging and its interaction with neurodegenerative diseases
+ Assessing functional status of community-dwelling individuals
+ Developing and deploying clinical systems to help families manage neurodegenerative diseases at home

CATHERINE EBERLE, M.D., C.M.D.
Associate Professor
Chief, Geriatrics, Extended Care and Rehabilitation-Hospice and Palliative Care Team, Nebraska-Western Iowa
+ Palliative Care-Care of complex patients with serious illness
+ Goals of Care discussions and Advance Planning
+ Learner and provider education of the above topics

ALFRED L. FISHER, M.D., PH.D.
Associate Professor
Division Chief
Neumann M. and Mildred E. Harris Professor of Geriatrics
+ Biology of aging research
+ Consultative and primary care for older adults
+ Application of biology of aging concepts to develop novel diagnostic and therapeutic approaches

MANDY BYERS, M.D.
Assistant Professor
Medical Director, St. Joseph Villa Skilled Nursing & Rehabilitation
+ Outpatient management of the frail elderly
+ Hospice and palliative care
+ Post-acute care and rehabilitation

ELIZABETH HARLOW, M.D.
Assistant Professor
Director, Curriculum Development
Director, Geriatric Medicine Track, Internal Medicine Residency Program
+ Medical student mentoring and education in geriatric medicine
+ Direction of and mentorship of residents in the medicine-geriatrics residency track
+ Comprehensive primary care of older adults

JOSEPH HEJKAL, M.D.
Assistant Professor
+ Assessment and prevention of delirium in hospitalized older adults
+ Assessment of complex older patients
+ Dementia care

JESSIE JENKINS, M.D.
Assistant Professor
+ Hospital care of older adults
+ Comprehensive assessment of medically complex older adults
+ Hospital associated disability

THUY KOLL, M.D.
Assistant Professor
+ Multimorbidity and optimization of care in older patients with cancer
+ Function and quality of life in older patients
+ Decision making in older patients with advanced illnesses

LOU LUKAS, M.D.
Associate Professor
Medical Director, Palliative Medicine, Nebraska-Western Iowa Health Care System (VA)
+ Complex communication and decision making
+ Psychedelic research in serious illness
+ Professional development and education

WILLIAM L. LYONS, M.D.
Professor
Director, Geriatrics Fellowship Program
+ Direct training program for geriatrics fellows
+ Interprofessional evaluation of older patients with cognitive and functional problems in consultation clinic
+ Approach to the complex, multimorbid older patient, including elicitation and negotiation of goals and priorities

NATALIE MANLEY, M.D., M.P.H.
Assistant Professor
Medical Director, Azria Health Gretna, Hillcrest Hospice & Nebraska City Prestige Care Center
+ Nursing home and hospice care
+ Caregiver support
+ Dementia care

DEBRA E. MOSTEK, M.D., C.M.D.
Assistant Professor
+ Community-based care
+ Hospice and palliative care
+ Elder mistreatment

JANE F. POTTER, M.D.
Professor
Medical Director, Geriatrics Outpatient & Engage Wellness
+ Interprofessional education in geriatrics
+ Geriatric Primary Care
+ Geriatrics education for surgical and medical specialists

MELISSA TEPLY, M.D.
Assistant Professor
Director, Hospice & Palliative Medicine Fellowship Program
+ Medical education on primary palliative care skills
+ Concurrent palliative care in oncology
+ Coping with serious illness

INFECTIOUS DISEASES

M. SALMAN ASHRAF, M.B.B.S.
Medical Director, Nebraska Infection Control Assessment and Promotion Program (ICAP)
Co-Medical Director, Nebraska Antimicrobial Stewardship Assessment and Promotion Program (ASAP)
+ Infection prevention and healthcare associated infections
+ Antimicrobial stewardship
+ Infections in the elderly

SARA BARES, M.D.
Assistant Professor
Co-Director, Undergraduate Medical Education Curriculum, Microbiology & Infectious Diseases
Medical Director, Nebraska AIDS Education and Training Center
+ HIV testing and prevention
+ Obesity and cardiometabolic complications in HIV
+ Medical education

DAVID BRETT-MAJOR, M.D., M.P.H.
Associate Professor
+ Tropical medicine
+ Biopreparedness

BRADLEY BRITIGAN, M.D.
Stokes-Shackleford Professor
Dean, College of Medicine
+ Free radical biology and iron metabolism
+ Pseudomonas pathogenesis
+ Pathogenesis of tuberculosis

KELLY CAWCUTT, M.D., M.S.
Assistant Professor
Associate Medical Director, Infection Control & Epidemiology
Co-Director, Digital Innovation and Social Media Strategy
+ Central-line associated bloodstream infections and vascular access
+ Ventilator-associated events/pneumonia
+ Use of social media in medicine

NICOLAS CORTES-PENFIELD, M.D.
Assistant Professor
Medical Director, Outpatient Parental Antibiotic Therapy
Associate Medical Director, Antimicrobial Stewardship
+ Complicated bone and joint infections
+ Clinical ethics
+ Medical education

NADA FADUL, M.D.
Associate Professor
Associate Medical Director, Specialty Care Center
+ HIV care and prevention
+ Implementation science of new treatment modalities
+ HIV testing and prevention in the african community

PAUL D. FEY, PH.D.
Professor
Vice Chair for Research, Pathology and Microbiology
Medical Director, Clinical Microbiology
+ Staphylococcal biology and niche metabolism
+ Antibiotic resistance mechanisms
+ Clinical microbiology diagnostics

DIANA FLORESCU, M.D.
Professor
Director, Transplant Infectious Diseases Research
Associate Director, Transplant Infectious Diseases Program
+ Viral Infections in solid organ transplant recipients
+ Infections in small bowel transplant recipients

ALISON FREIFELD, M.D.
Professor
Director, Section of Oncology Infectious Diseases
+ Infections in febrile neutropenia
+ Epidemiology of bloodstream infections in cancer patients
+ Antibiotic resistance

ANDREA GREEN HINES, M.D.
Assistant Professor
+ Adult and pediatric infectious diseases
+ Infections in cancer patients
+ Antimicrobial stewardship

RICHARD HANKINS, M.D.
Clinical Instructor
Associate Medical Director, Infection Control & Epidemiology
+ Catheter related infections
+ Infection control
+ Antimicrobial stewardship

ANGELA HEWLETT, M.D., M.S.
Associate Professor
Director, Section of Orthopedic Infectious Diseases
Medical Director, Nebraska Biocontainment Unit
+ Orthopedic infectious diseases
+ Biocontainment and emerging infectious diseases
+ Complicated bone and joint infections
+ Biopreparedness

ANDRE KALIL, M.D., M.P.H.
Professor
Director, Transplant Infectious Diseases
+ Transplant infectious diseases
+ CMV infections
+ Severe sepsis and pneumonia

JAMES LAWLER, M.D., M.P.H.
Associate Professor
Director, International Programs and Innovation, Global Center for Health Security
Director, Clinical and Biodefense Research, National Strategic Research Institute

JASMINE MARCELIN, M.D.
Associate Program Director, Internal Medicine Residency
+ Antimicrobial stewardship
+ Diversity, inclusion and equity in medicine
+ Medical education
+ Healthcare social media

KARI NEEMANN, M.D.
Assistant Professor
+ Adult and pediatric infectious diseases
+ Infections in cancer patients

RAZAN EL RAMAHI, M.B.B.S.
Assistant Professor

MARK E. RUPP, M.D.
Professor
Division, Infectious Diseases
Medical Director, Infection Control & Epidemiology
+ Healthcare associated infections
+ Antimicrobial resistance and stewardship
+ Staphylococcal disease

ELIZABETH SCHNAUBELT, M.D.
Clinical Assistant Professor
Medical Director, CSTARS Omaha

RICHARD STARLIN, M.D.
Assistant Professor
Medical Director, Employee Health
+ Non-tuberculous mycobacteria
+ Occupational health
+ Infectious disease in the community

ERICA STOHS, M.D., M.P.H.
Assistant Professor
Associate Medical Director, Antimicrobial Stewardship Program
+ Antimicrobial stewardship in immunocompromised hosts
+ Antibiotic allergies in transplant recipients
+ Infections in solid organ and stem cell transplant recipients

SUSAN SWINDELLS, M.B.B.S.
Professor
+ Management of HIV linfection
+ HIV/TB co-infection

TREVOR VAN SCHOONEVELD, M.D.
Associate Professor
Fellowship Director, Infectious Diseases
Medical Director, Antimicrobial Stewardship
Associate Medical Director Infection Control & Epidemiology
+ Antimicrobial stewardship
+ Multi-drug resistant gram negative pathogens
+ Clostridium difficile infections

ANDREA ZIMMER, M.D.
Assistant Professor
Associate Program Director, Infectious Diseases
Co-Director, Graduate Medical Education Curriculum
Director, Oncology Infectious Diseases Section
Associate Director, Infectious Diseases Fellowship
+ Microbiology and infectious diseases block
+ Opportunistic infections in cancer patients
+ Infections in hematopoietic stem cell transplant recipients
+ Medical Student Education

NEPHROLOGY

MARIUS C. FLORESCU, M.D.
Associate Professor
+ Interventional nephrology
+ Hepatorenal syndrome
+ Novel hemodialysis vascular access devices

DOUGLAS D. FRANZ, M.D., M.P.H.
Assistant Professor
+ Kidney dysfunction in patients with advanced heart failure
+ CKD and peripheral vascular disease
+ LVAD induced kidney dysfunction

JAY L. HAWKINS, M.D.
Assistant Professor
+ Chronic kidney disease
+ Diabetic nephropathy
+ In-center hemodialysis

ERIC D. LANGEWISCH, M.D.
Associate Professor
+ Solid organ transplant histocompatibility
+ Kidney transplant rejection
+ Transplant organ allocation

ROSLYN B. MANNON, M.D.
Professor
Associate Chief, Research, Nephrology
Vice Chair, Research Mentoring and Academic Development
+ Management of late allograft failure
+ Monitoring assays for transplant rejection and immune quiescence
+ Clinical trial design and endpoints for transplant therapeutics

CLIFFORD D. MILES, M.D., M.S.
Associate Professor
Medical Director, Kidney and Pancreas Transplant Program
+ Costimulation blockade in renal transplantation
+ Simultaneous renal/nonrenal organ transplantation
+ BK virus nephropathy

RYAN P. MULLANE, D.O.
Assistant Professor
+ Acute kidney injury
+ Transition to endstage kidney disease
+ Undergraduate and graduate medical education

TROY J. PLUMB, M.D.
Associate Professor
Dr. Dennis Ross Chair
Division Chief, Nephrology
Medical Director, Acute Dialysis
Director, Fellowship Program
+ Home hemodialysis
+ Peritoneal dialysis
+ Transitional care dialysis models

KETKI K. TENDULKAR, M.B.B.S.
Associate Professor
+ Kidney donor
+ Chronic kidney disease and pulmonary hypertension
+ CKD and cancer

SCOTT G. WESTPHAL, M.D.
Assistant Professor
Associate Director, Fellowship Program
+ Kidney transplant organ allocation
+ Transplantation ethics
+ MultiOrgan Transplantation

ONCOLOGY & HEMATOLOGY

ZAID ALKADHIMI, M.D.
Associate Professor
Director, Bone Marrow Transplant and Cellular Therapy
+ Myeoldysplastic syndrome
+ Myeloproliferative neoplasms
+ Bone marrow transplant

JAMES ARMITAGE, M.D.
The Joe Shapiro Professor of Medicine
+ Lymphoma
+ Hodgkin's Lymphoma
+ CLL

MUHAMED BALJEVIC, M.D.
Assistant Professor
+ Multiple myeloma
+ Myeloproliferative neoplasms
+ Bone marrow transplant

VIJAYA R. BHATT, M.D.
Assistant Professor
+ Myeoldysplastic syndrome,
+ Myeloproliferative neoplasms
+ Bone marrow transplant

PHILIP BIERMAN, M.D.
Professor
+ Lymphoma
+ Bone marrow transplant
+ Chronic lymphocytic leukemia

ROBERT G. BOCIEK, M.D.
Associate Professor
+ Lymphoma
+ Bone marrow transplant
+ Chronic lymphocytic leukemia

AXMI N. BUDDHARAJU, M.B.B.S.
Assistant Professor
+ Nonmalignant hematology
+ Hemophilia

VINICIUS ERNANI, M.D.
Assistant Professor
+ Head and neck
+ Lung
+ Neuroendocrine malignancies

APAR K. GANTI, M.D.
Professor
+ Head and neck
+ Lung

JEAN L. GREM, M.D.
Professor
+ Gastrointestinal cancers
+ Colorectal cancers

KRISHNA GUNDABOLU, M.B.B.S.
Assistant Professor
+ Myeoldysplastic syndrome
+ Myeloproliferative neoplasms
+ Leujemia

SARAH A. HOLSTEIN, M.D., PH.D.
Associate Professor
+ Multiple myeloma

AVYAKTA KALLAM, M.D.
Assistant Professor
+ Lymphoma

KELSEY KLUTE, M.D.
Assistant Professor
+ Gastrointestinal cancers

JAIRAM KRISHNAMURTHY, M.D.
Assistant Professor
+ Breast cancer

MATTHEW A. LUNNING, M.D.
Assistant Professor
+ Lymphoma, multiple myeloma
+ Hodgkins lymphoma
+ CAR T-cell research

LORI J. MANESS HARRIS, M.D.
Associate Professor
+ Myeoldysplastic syndrome
+ Myeloproliferative neoplasms
+ Leukemia

ALISSA S. MARR, M.D.
Assistant Professor
+ Lung
+ Skin
+ Neuroendocrine malignancies

ALEX NESTER, M.D.
Assistant Professor
+ Benign hematology

ELIZABETH REED, M.D.
Professor
+ Breast cancer

JAMES K. SCHWARZ, M.D.
Assistant Professor
+ Genitourinary
+ Gastrointestinal

NICOLE A. SHONKA, M.D.
Associate Professor
+ Sarcoma
+ Brain
+ Central nervous system

PAVANKUMAR TANDRA, M.B.B.S.
Assistant Professor
+ Breast cancer

BENJAMIN TEPLY, M.D.
Assistant Professor
+ Genitourinary

JULIE VOSE, M.D.
Professor
+ Lymphoma
+ Bone marrow transplant
+ Multiple myeloma

PULMONARY, CRITICAL CARE, SLEEP & ALLERGY

KRISTINA BAILEY, M.D., A.T.S.F.
Associate Professor
+ Role aging plays in innate immunity of lungs
+ How exposures, such as heavy alcohol use, cigarette smoking, cannabis and CBD use affects lungs
+ How airway inflammation is modulated in lungs

SABIN BISTA, M.B.B.S., F.A.A.S.M.
Associate Professor
+ Sleep disorders
+ Intersection of sleep in pulmonary disorders
+ Critical care

BRIAN BOER, M.D., PH.D.
Assistant Professor
Medical Director, Medical Intensive Care Unit
+ Interventional pulmonology
+ Emerging procedural modalities
+ Point-of-care ultrasound

JOHN DICKINSON, M.D., PH.D.
Assistant Professor
+ Cystic fibrosis
+ Airway disease: asthma, COPD, bronchitis
+ Factors that regulate airway mucous in mucoobstructive lung disease
+ Critical care medicine

DAVID GANNON, M.D.
Associate Professor
Medical Director, Critical Care
+ Critical care medicine
+ Quality improvement and performance improvement

JOHN HARRINGTON, M.D.
Associate Professor
Director, Sleep Fellowship Program
+ CPAP adherence
+ Obstructive sleep apnea
+ REM sleep behavior disorder

DANNY HERSHBERGER, M.D.
Assistant Professor
Director, Respiratory Block
+ Interstitial lung disease
+ Connective tissue related lung diseases
+ Student, resident, fellow and patient education

CANDACE HUEBERT, M.D.
Associate Professor
+ Clinical service – ICU and pulmonary
+ Fellowship education and curriculum development
+ Graft v host disease and multidisciplinary care

DEREK KRUSE, M.D.
Assistant Professor
Associate Medical Director, Adult Progressive Care Unit
+ Teach POCUS and its clinical application
+ Staff fellow's outpatient clinic
+ Pulmonary and critical care medicine

DUSTIN KRUTSINGER, M.D.
Assistant Professor
+ Clinical trials
+ Behavioral economics
+ Critical care medicine

TRICIA D. LEVAN, PH.D.
Associate Professor
+ Genetic epidemiology of innate immunity
+ Gene by environmental interactions in asthma, allergy and COPD
+ Intestinal dysbiosis in COPD

SARA MAY, M.D.
Assistant Professor, Allergy, Asthma and Immunology
+ Drug allergy including aspirin exacerbated respiratory disease (AERD)
+ Urticaria (hives) and angioedema (swelling)
+ Allergic diseases in pediatric patients
+ Education of future providers

PETER (JIM) MURPHY, M.D.
Associate Professor
Medical Director, Respiratory Therapy
+ Adults with cystic fibrosis
+ Respiratory care services
+ Adults with bronchiectasis

AMOL PATIL, M.B.B.S.
Associate Professor
Associate Program Director, Pulmonary, Critical Care Medicine Fellowship
Medical Director, Neurointensive Care Unit and Pulmonary Rehabilitation
+ Neurocritical care
+ Interventional pulmonology
+ Interstitial lung disease
+ Resident education
+ Neurocritical care and interventional pulmonary

CRAIG PIQUETTE, M.D., F.A.C.P., F.C.C.P.
Professor
Chair, COM Curriculum Committee
Medical Director, Pulmonary Function Lab, Omaha VA Medical Center
Director, Pulmonary, Critical Care Medicine Fellowship Program
+ Critical care medicine
+ Undergraduate and graduate medical education
+ Obstructive lung disease including asthma and COPD

JILL POOLE, M.D.
Professor, Allergy, Asthma and Immunology
+ Allergy and asthmatic diseases
+ Urticarial (hive) syndromes and eosinophilic esophagitis
+ Environmental and agriculture organic dust-related respiratory disorders

STEPHEN I. RENNARD, M.D.
Margaret R. Larson Professor of Respiratory Diseases
+ Translational medicine: early clinical trials
+ COPD: innovative clinical trials
+ Biomarkers for stratification of clinical response

DEBRA J. ROMBERGER, M.D.
Professor
Chair, Department of Medicine
+ Mechanisms of organic dust associated airway inflammation and disease
+ Environmental lung disease
+ COPD, including pulmonary rehabilitation

ANDREW RORIE, M.D.
Assistant Professor, Allergy, Asthma and Immunology
+ Aerobiology
+ Allergen immunology
+ Severe asthma

DERRICK SAMUELSON, PH.D.
Assistant Professor
+ Bacterial pneumonia
+ Microbiota
+ Immune regulation
+ Alcohol
+ Gut lung axis

JOSEPH SISSON, M.D.
Margaret R. Larson Professor
Division Chief, Pulmonary, Critical Care, Sleep & Allergy
+ Airway ciliary motility
+ Alcohol and mucociliary clearance
+ The role oxidative stress plays in regulating motile and primary cilia in the airways

BRONWYN SMALL, M.D.
Assistant Professor
+ Clinical care in lung transplant, pulmonary and critical care
+ Research in lung transplant and microbiome
+ Education of medical students, residents and fellows

HEATHER STRAH, M.D.
Assistant Professor
Medical Director, Lung Transplantation
+ Lung transplant
+ Organ allocation
+ Multiorgan donor management

MICHAEL SUMMERS, M.D., M.B.A.
Assistant Professor
Medical Director, The Nebraska Medical Center Sleep Center
+ Sleep disordered breathing
+ Disorders of hypersomnolence
+ Application of machine learning/artificial intelligence in medicine

MEILINH THI, D.O.
Assistant Professor
+ Cystic fibrosis and multidisciplinary care
+ Bronchiectasis
+ Health disparities within the cystic fibrosis population

AUSTIN THOMPSON, M.D.
Professor
Medical Director, Pulmonary Function Laboratory
Medical Director Specialties, Internal Medicine DOC Clinic
+ Pulmonary hypertension
+ Interstitial lung disease

JOEL VAN DE GRAAFF, M.D.
Assistant Professor, Allergy, Asthma and Immunology
+ Food allergy
+ Drug allergy
+ Pediatric allergy and immunology

SUSANNA G. VON ESSEN, M.D., M.P.H.
Professor
+ Agricultural lung disease and other forms of occupational lung disease
+ Occupational health
+ Sarcoid

TAMMY WICHMAN, M.D.
Associate Professor
Program Director, Internal Medicine Residency
+ Clinical and research interest in pulmonary hypertension
+ Rheumatologic diseases and pulmonary hypertension
+ Congenital heart disease and pulmonary hypertension
+ Oxidative stress and pulmonary hypertension
+ ICU

TODD A. WYATT, PH.D.
Professor
Deputy Director, Central States Center for Agricultural Safety and Health
+ The alcohol exposome's role in lung infection
+ eCigarettes and vaping related airways injury
+ Occupational dusts in chronic lung disease

RHEUMATOLOGY & IMMUNOLOGY

AMY CANNELLA, M.D.
Associate Professor
Director, Rheumatology Fellowship Program
+ Medical Education
+ Musculoskeletal ultrasound
+ Rheumatoid arthritis

BRYANT ENGLAND, M.D.
Assistant Professor
+ Clinical and epidemiologic research in rheumatoid arthritis
+ Rheumatoid arthritis associated lung disease
+ Epidemiology and pharmacoepidemiology of rheumatic diseases.
+ Comorbidities and multimorbidity in rheumatoid arthritis

ALAN R. ERICKSON, M.D.
Assistant Dean, Student Affairs, College of Medicine
+ Clinical research in rheumatoid arthritis

MICHAEL G. FEELY, M.D.
Assistant Professor
+ Inflammatory myopathies
+ Rheumatoid arthritis

MICHELENE HEARTHHOLMES, M.D.
Assistant Professor
+ Systemic lupus erythematosus
+ Medical education
+ Osteoporosis
+ Musculoskeletal ultrasound

LYNELL W. KLASSEN, M.D.
Robert L. Grissom Professor of Internal Medicine
+ Pathogenesis of autoimmunity and immunodeficiency

TINA D. MAHAJAN, M.D.
Assistant Professor
+ Rheumatoid arthritis
+ Autoimmune lung disease

JENNIFER L. MEDLIN, M.D.
Assistant Professor
+ Lupus

KALEB D. MICHAUD, PH.D.
Associate Professor
+ Outcomes research in rheumatic diseases using modern epidemiological, econometric and biostatistical methods

TED R. MIKULS, M.D.
Umbach Professor of Rheumatology
Vice Chair, Research, Internal Medicine
+ Outcomes and epidemiology of rheumatoid arthritis
+ Health outcomes and quality of care in gout

GERALD F. MOORE, M.D.
Professor
Senior Associate Dean, Academic Affairs, College of Medicine
+ Educational research related to student performance and assessment

JAMES R. O'DELL, M.D.
Vice Chair, Education, Internal Medicine
Division Chief, Rheumatology
+ Investigator initiated clinical trials in rheumatoid arthritis (RA)
+ Treatment of gout
+ Clinical trial design
+ Predicting response to therapy in RA
+ The etiology of RA

MARCUS H. SNOW, M.D.
Assistant Professor
+ Scleroderma and Raynaud's phenomenon

GEOFFREY THIELE, M.D.
Professor
+ Post-translational modification of self-proteins to result in autoimmune diseases
+ Pathophysiology of inflammatory diseases
+ Generation and abrogation of immunological self-tolerance

SPECIAL RECOGNITION FOR

NATIONAL HONORS

J. Scott Neumeister, M.D., F.A.C.P.
received the national American College of Physicians (ACP) Herbert S. Waxman Award for Outstanding Medical Student Educator in 2019

David O'Dell, M.D., M.A.C.P.
received the ACP's Jane F. Desforges Distinguished Teaching Award in April 2020.

Kelly J. Caverzagie, M.D., F.A.C.P., F.H.M.
has been elected to the Amaerican Medical Association Council on Medical Education.

Micah W. Beachy, D.O., F.A.C.P., S.F.H.M.
served as chair of the ACP Council of Early Career Physicians in 2017-18 and was selected as one of the top 10 hospitalists in the country by ACP 2019.

Thomas Tape, M.D., M.A.C.P., F.R.C.P. and James R. O'Dell, M.D.
were inducted as Masters in the ACP in 2017.

Julie Vose, M.D.
was selected as a fellow of the Royal College of Physicians of Edinburgh in 2019. She served as president of the American Society of Clinical Oncology (ASCO) in 2015.

Thomas Tape, M.D., M.A.C.P., F.R.C.P.
was selected as a fellow in the Royal College of Physicians in 2018. He served as chair of the ACP Board of Regents in 2016.

James R. O'Dell, M.D.
received the 2016 American College of Rheumatology (ACR) Distinguished Clinical Investigator Award.

Whitney Goldner, M.D.
was elected vice president of the Endocrine Society in 2018 and will serve on its Board of Directors through 2022.

Stephen I. Rennard, M.D.
was selected to receive an Honorary Fellowship of the Faculty of Pharmaceutical Medicine from the Royal Colleges of Physicians in 2019.

REMEMBERING

OUR LEGACIES

James Lane, M.D.

Endocrinologist James Lane, M.D., a former UNMC faculty member and the inaugural director of The Nebraska Medical Center Diabetes Center, died of glioblastoma Sept. 4, 2018 in Oklahoma City, Okla. He was 58.

Dr. Lane joined UNMC in 1998 and, during his time here, established the young adult diabetes clinic, served as director of the endocrinology fellowship and local principal investigator for several national trials for prevention of type 1 diabetes, and initiated many studies that explored the causes of diabetic complications. He was president of the Heartland Chapter of the American Diabetes Association Nebraska affiliate and was named director of The Nebraska Medical Center Diabetes Center in 2007.

"Jim was passionate about diabetes care," said Jennifer Larsen, M.D., vice chancellor for research at UNMC. "During his time on faculty he served as the diabetes center director and the diabetes and endocrinology fellowship director. He was instrumental in developing many of our diabetes education programs and is still remembered fondly by his patients."

"Dr. Lane was a true partner with the entire diabetes center team as we moved the UNMC/The Nebraska Medical Center Diabetes Center inpatient accreditation to fruition," said Beth Pfeffer, a registered nurse and former manager of the Diabetes Center.

In 2011, Dr. Lane became the director of adult clinical programs at the University of Oklahoma Health Sciences Center's Harold Hamm Diabetes Center. He was affiliated with multiple hospitals in the Oklahoma City area.

Said Lynn Mack, M.D., associate professor of internal medicine in UNMC's Diabetes, Endocrinology and Metabolism Division: "He was an excellent role model with a passion for practicing the best medicine, while still committing and spending time with his family and having active hobbies like supporting his beloved St. Louis Cardinals."

Vijay Shivaswamy, M.D., associate professor in the diabetes, endocrinology and metabolism division and former fellow, said: "Dr. Lane taught me to be an endocrinologist and almost turned me into a Cardinals fan."

Dr. Lane received his medical degree in 1984 from the University of Missouri - Kansas City School of Medicine, did his internal medicine residency and endocrinology and metabolism fellowship at Rush-Presbyterian-St. Lukes Medical Center in Chicago, and an endocrinology and metabolism fellowship at the University of Minnesota, Minneapolis.

He is survived by his wife, Pascale, a former UNMC pediatric nephrologist; daughter and son-in-law, Jennifer and Alex Blevins; son, Tim; and parents, James and Patricia Lane.

The UNMC Division of Diabetes, Endocrinology and Metabolism is establishing a new Dr. James Lane Lectureship. Donations may be made online to the Dr. James Lane Diabetes Education Fund at **http://nufoundation.org/jameslane** or mailed to the University of Nebraska Foundation, 1010 Lincoln Mall, Suite 300, Lincoln NE 68508, referencing the Dr. James Lane Diabetes Education Fund.

Questions? Contact Meghan Perrin at meghan.perrin@nufoundation.org.

Having had the privilege of training under Dr. Lane, I witnessed the variety of ways he touched so many lives. His compassionate and personable approach to his patients, his tireless efforts to educate learners, and his dedication and devotion to the mission and staff of the Diabetes Center all spoke to Dr. Lane's values.

Brian Boerner, M.D., assistant professor in the diabetes, endocrine and metabolism division and former fellow

OUR PARTNERS IN SUCCESS

NEBRASKA MEDICINE

The UNMC Department of Internal Medicine's major clinical and educational affiliation is with Nebraska Medicine. With a history dating back to 1869, Nebraska Medicine was originally formed by the merger of University Hospital and Bishop Clarkson Memorial Hospital in 1997. Nebraska Medicine now encompasses facilities such as UNMC Physicians Clinics, Nebraska Medicine – Bellevue and Nebraska Medicine – Village Pointe. The relationship between UNMC and Nebraska Medicine has attracted patients from across the region and around the world. Currently, the health care system has 809 licensed beds in Omaha and Bellevue. Nebraska Medicine – Nebraska Medical Center is the state's largest health care facility with over 8,000 employees. As a major tertiary health care center, it provides:

+ Care for patients from all 50 states, the District of Columbia and 43 foreign countries;
+ Has more than 70 specialty and primary care clinics, offering 50 specialties and subspecialties;
+ Is known internationally for its oncology, solid organ and bone marrow transplantation services and is recognized nationally and regionally for its neurosciences and cardiovascular programs;
+ Holds the only state-designated Comprehensive Trauma Center serving both pediatric and adult patients 24/7;
+ Is designated as a level-four facility by the National Association of Epilepsy Centers; and
+ Holds the Joint Commission's "gold seal of approval" for clinical programs in stroke management, heart failure and acute myocardial infarction.

Nebraska Medicine continues to grow with an addition of a $32 million cardiac catheterization and electrophysiology lab, the Fred & Pamela Buffett Cancer Center, the Behavioral Health Intensive Outpatient Program, and the Dr. Edwin G. & Dorothy Balbach Davis Global Center, which houses the iEXCEL initiative.

Every year, Nebraska Medicine provides expert care that results in over 33,606 discharges, 1.06 million outpatient visits (primary and specialty), and 95,040 emergency visits.

Uniquely, Nebraska Medicine operates a 10-bed biocontainment unit that is currently one of three existing units in the United States that is equipped to safely care for those exposed to highly-contagious, dangerous diseases. The hospital also has the only federal quarantine unit in the country that contains 20-units. These units were essential in 2020 when the COVID-19 virus began to spread from Wuhan, China. During this time civilians who had been exposed spent 14 days quarantined and several were transferred to the biocontainment unit until they were asymptomatic.

VA NEBRASKA-WESTERN IOWA HEALTH CARE SYSTEM

Affiliation with the VA Nebraska-Western Iowa Health Care System (NWIHCS) is critical to the department of internal medicine's tripartite mission of clinical care, research and education. NWIHCS provides integrated inpatient and outpatient care to veterans in Nebraska, western Iowa and portions of Kansas and Missouri. The Omaha VA Medical Center (OVAMC) is an acute care, highly-affiliated facility that operates approximately 100 inpatient beds and provides full-service medical care to thousands of veterans.

Inpatient and outpatient health care is provided in this integrated system through a strong system of primary care supported by tertiary specialty activity in medicine, surgery, and psychiatry. More than 635,00 outpatient visits were conducted in Fiscal Year 2019. The OVAMC provides an irreplaceable venue for the department's teaching activities involving medical students, residents and fellows. In addition, the VA has a major research service that provides infrastructure to support basic science, translational and clinical research. Several of the department's basic research programs are based in the VA Research and Development Service. Areas of research focus at the VA include rheumatoid arthritis and gout clinical outcomes, mechanisms of alcohol related organ disease, diabetes clinical and basic research, and occupational related lung disease.

The department is particularly proud of the completed VA Cooperative trial evaluating treatments for rheumatoid arthritis and the ongoing VA Cooperative trial related to gout.

COLLEGE OF MEDICINE

DEPARTMENT OF INTERNAL MEDICINE

983332 Nebraska Medical Center
Omaha, NE 68198-3332

unmc.edu/intmed