



Connections

MAYO CLINIC SCHOOL OF HEALTH SCIENCES ALUMNI ASSOCIATION FALL 2019



FROM THE ALUMNI ASSOCIATION president



A stylized, handwritten signature in black ink that reads "PamLovett".

Pamela Lovett, DNP, CRNA (NA '03)
Certified registered nurse anesthetist
Department of Anesthesiology and
Perioperative Medicine
Assistant professor of anesthesiology
Mayo Clinic in Florida

This year's MCSHS Alumni Association annual dinner and program brought together friends, family and colleagues who share a passion for Mayo Clinic's education and clinical experiences. Thank you to all who participated. I look forward to next year's festivities. Mark your calendars for that event on April 17, and start connecting with friends and colleagues who made your experience at Mayo Clinic so special. Let's have a showing like never before!

During my presidency, I have committed to several undertakings. I will rely on the experience of Alumni Center staff in Rochester and past Alumni Association Board members to assist me in achieving my initial goals. First, I would like to raise awareness about the Alumni Association, particularly in Florida and Arizona. We have already started reaching out and connecting with key stakeholders to spread the word that the Alumni Association does amazing things.

Second, I want to support, guide and encourage Mayo Clinic allied health faculty to apply for academic rank. This allows recognition of your educational and professional accomplishments and is symbolic of your dedication to personal and professional growth. I have experienced the positive impact academic appointment has on staff.

Finally, we need to recognize that MCSHS is growing as is the alumni population. For many years we have supported special events and gatherings with allocated funds and no official Alumni Association dues. We would like to ask for your annual support of \$10, which you can pay online (mshsalumni.mayo.edu/pay-dues).

I want you all to feel free to reach out to me or any Board member. The Alumni Association offers many opportunities to get involved, and we would love to share them with you. Visit our website mshsalumni.mayo.edu and learn how we continue to make a difference.

TABLE OF contents

2019 Alumni Association meeting2

Providing gender-affirming care.....4
 Keynote address recap, Cesar Gonzalez, PhD, LP

Recognition of Outstanding Contribution award.....6
 Sarah Oakley Holbert, CCC-A

Know your Board8
 Q&A with Lidia Pomaville, PA-C, and LaRissa Adams

Recruitment boost12

Independent stepping.....16

Physical therapist YouTube star.....20

Come for the rotation, stay for the career24

From biz exec to nurse26

From lab tech to sonographer for the challenge.....28

Outstanding Educator awards30

News briefs32



On the cover:
 Jolene Young is admissions recruiter for Mayo Clinic College of Medicine and Science. Her efforts on behalf of Mayo Clinic School of Health Sciences, including 265 recruiting events in 2018, have resulted in a significant increase in inquiries and applications.

2019

Alumni Association meeting

More than 150 alumni and their guests attended the annual dinner and program in April. Highlights included:

- Passing of the gavel from Jocelyn Moen, RDCS (ECHO '99), cardiac sonographer at Mayo Clinic in Rochester, to Pamela Lovett, DNP, CRNA (NA '03), certified registered nurse anesthetist, Department of Anesthesiology and Perioperative Medicine at Mayo Clinic in Florida
- Keynote speaker Cesar Gonzalez, PhD, LP, Department of Psychiatry and Psychology at Mayo Clinic in Rochester (page 4)
- Honoring Sarah Oakley Holbert, CCC-A (AUDX '08), audiologist, Department of Otolaryngology-Head & Neck Surgery at Mayo Clinic in Arizona, with the Recognition of Outstanding Contribution award (page 6)

The MCSHS Alumni Association Board of Directors met to approve new officers and Board members and conduct other business.

New president-elect and vice president

- President-elect Christina Lazer, PA-C (PA '09), physician assistant, Department of Veterans Affairs, Rochester, Minnesota
- Vice president Jody Erickson (RAD '94), manager, clinical radiology, Department of Radiology, Mayo Clinic in Florida

Outgoing Executive Committee member

Executive Committee manages business of Alumni Association Board of Directors between annual meetings

- Caren Hughes, PharmD, RPh (PHARM '06), Division of Hematology and Medical Oncology, Mayo Clinic in Florida

Incoming Executive Committee member

- Adrijana Anderson, PA-C (PA '15), physician assistant, Division of Hospital Internal Medicine, Department of Internal Medicine; Department of Critical Care Medicine, Mayo Clinic in Arizona

Outgoing Board members

- Jody Erickson (RAD '94), manager, clinical radiology, Department of Radiology, Mayo Clinic in Florida
- Chelsey Hoffmann, PA-C, MS (DIET '11, PA '14), physician assistant, Department of Anesthesiology and Perioperative Medicine, Mayo Clinic in Rochester
- Stephanie Nunn (CLS '10), student, Doctor of Nurse Therapy Program, University of North Florida, Jacksonville
- Karen Shaw (RTS '82), retired respiratory therapist and clinical educator, Aurora, Colorado
- Andrew Walker, PA-C (PA '14), physician assistant, Division of Hospital Internal Medicine, Mayo Clinic in Arizona

Incoming Board members

- Alexandra Bartow, ACNP-BC, MSN (CNPF '13), nurse practitioner, Department of Cardiothoracic Surgery, University of Pittsburgh Medical Center, Pennsylvania
- Chelsy Copeland (CLS '12), medical technologist/information management specialist, Department of Laboratory Medicine and Pathology, Mayo Clinic in Florida
- Viktoriya Senkiv, AGACPN-BC, MS (NP '16), cardiology nurse practitioner, University of Michigan, Ann Arbor
- Arthur (Travis) Shelton, PharmD (PHRM '09), supervisor, pharmacy education, Department of Pharmacy, Mayo Clinic in Arizona
- Joiel Woods, RT(R) (RAD '10), clinical coordinator, Radiography Program, Mayo Clinic School of Health Sciences in Florida





Save the date!

The 2020 Mayo Clinic School of Health Sciences Alumni Association annual meeting and program will be Friday, April 17. The main event will be in Rochester, Minnesota. For the first time, simultaneous events will be held in Arizona and Florida. Details to come.



Interested in serving on the Board?

The MCSHS Alumni Association Board of Directors is comprised of volunteers who serve for three years. They provide direction for programming and activities, including serving on committees and task forces.

To learn more: mshsalumni.mayo.edu/about/board-of-directors or contact a Board member





Providing gender-affirming care

“One of the signs of a truly educated people, and a broadly educated nation, is lack of prejudice.”

- Charles H. Mayo, MD, 1926

Cesar Gonzalez, PhD, LP, delivered the keynote presentation at the MCSHS Alumni Association annual dinner and program. His topic was “From Tolerance to Appreciation: Providing Gender-Affirming Care to Transgender and Gender-Diverse Patients.”

Dr. Gonzalez, Division of Integrated Behavioral Health, Department of Psychiatry and Psychology at Mayo Clinic in Rochester and assistant professor of family medicine and psychology, began working with transgender patients in 2003 in Los Angeles, California. He completed a fellowship in transgender health at the University of Minnesota in 2008 and came to Mayo Clinic in 2014. Now he’s clinical director of Mayo Clinic’s Transgender and Intersex Specialty Clinic, which was established in 2015. The clinic’s providers in endocrinology, surgery and behavioral health work together to provide integrated care.

Dr. Gonzalez’s talk focused on building psychological safety for patients whose identity is transgender or gender-diverse. “Integrated, whole-person care is what Mayo Clinic does well every day,” he says. “We’re learning how to be aware of and sensitive to the needs of an increasingly visible patient population that deserves our approach to care, safety and security in our environment, and affirmation of identity just like all of our other patients.”

When Dr. Gonzalez asked attendees how many know someone who is transgender, approximately one-third of the audience raised its hands.

“We all play a role in helping our transgender patients and colleagues heal through the experiences we share with them,” says Dr. Gonzalez. “Providers and allied health staff go into health care to heal others. Healing happens through experiences as well as with pills and procedures.

“We all just want to feel like ourselves and as if we belong. Your identity is a crucial component to your being able to thrive in the world. Transgender patients often experience discrimination and are ostracized by their families and society. As a result of stigma, they’re highly vulnerable and marginalized and endure significant trauma,

including in health care situations. Being able to help them better understand themselves and feel fulfilled in the world is rewarding and part of our Mayo Clinic mission.”

Dr. Gonzalez cited statistics about high rates of suicide, suicide attempts, depression and self-injury among transgender individuals. “They aren’t born with those risks,” he says. “The risks develop as those who are in a minority group are discriminated against and stigmatized. As a result of feeling as if they don’t belong, transgender individuals often are in a state of constant stress.”

Dr. Gonzalez advocates providing gender-affirming care and using gender-affirming language, which go a long way toward building trusting relationships with patients. It also helps to engage them in their care.

Rather than ask every patient their preferred pronoun, Dr. Gonzalez recommends a conversation starter such as, “I’m Dr. Gonzalez. Are you OK with my calling you Jen, or do you prefer something else?”

“About 5% of all patients don’t go by the name in their medical chart, so it makes sense to ask what they prefer to be called. Their response will trigger other questions and allow you to inquire about preferred gender pronoun. Be sensitive and present, and listen for hesitation in the responses.”

Dr. Gonzalez explains that many transgender patients may hesitate in answering questions because they’ve had negative medical interactions or trauma. Vulnerable patients may be quiet and not advocate for themselves.

He recommends building trust, collaboration and transparency by empowering patients with choices. “A transgender patient who has been sexually assaulted may react negatively to the suggestion of a pelvic exam,” says Dr. Gonzalez. “Rather than tell this patient the plan of action for care, try a conversation such as this: ‘I understand what your experiences have been like. My recommendations about your care are as follows. What are your thoughts about them? Should we work on X before doing Y? What can I do to help you get to our longer-term goal?’”

Dr. Gonzalez encourages allied health professionals to learn more about working with gender-diverse patients and colleagues:

lgbthealtheducation.org | transhealth.ucsf.edu | wpath.org

RECOGNITION OF OUTSTANDING CONTRIBUTION AWARD

Sarah Oakley Holbert moves mountains

Sarah Oakley Holbert, CCC-A (AUDX '08), was described by former students who nominated her for the 2019 MCSHS Alumni Association Recognition of Outstanding Contribution award as someone who moves mountains to advance trainees' clinical interests.

In her 10 years on staff at Mayo Clinic, Holbert has mentored more than 30 audiology trainees who are now at top-notch hospitals, universities, private practices and research institutions around the country.

"It's wonderful knowing you've positively impacted people's lives and launched them into successful careers," says Holbert. "I'm incredibly proud of what our trainees have achieved and how that makes me part of audiology's big picture. These are the people who will move our field forward."

Holbert is an audiologist in the Department of Otolaryngology-Head & Neck Surgery at Mayo Clinic in Arizona and program director of the yearlong MCSHS Audiology Externship on that campus for the last four years. She completed the externship herself in 2008.

"My externship was amazing," she says. "I had the best mentors and was well prepared to be an audiologist when I graduated."

Holbert says Michael Cevette, PhD (AUDI '87), was her primary mentor. "He has always been available to discuss any question, and he provides great advice and perspective. He's made me a better problem-solver."

"I adopted Dr. Cevette's welcoming, collaborative teaching style — working one-on-one with students, talking about what went well and helping students learn without feeling intense pressure."

Holbert's efforts to promulgate her mentor's teaching style appear to have succeeded. Those nominating her for the award cited her dedication, compassion, endless patience, resourcefulness, enthusiasm, calm and unique ability to transfer knowledge to students — in addition to her willingness to move mountains to provide them

with the best clinical experiences. Dr. Cevette describes Holbert as a magnet for students in training.

"Dr. Holbert coordinates unique interdepartmental experiences in the otolaryngology department," says Diane Cheek, AuD, CCC-A (AUDX '18), an audiologist at Carondelet St. Joseph's Hospital in Tucson, Arizona. "In my case, this involved arranging for trainees to observe otologic and cochlear implant surgeries. What an educational experience it was to observe Mayo Clinic's operating neurotologist and ask questions about what we otherwise would only read about in textbooks!"

Former student Aileen Wong, AuD, CCC-A (AUDX '11), a research audiologist at the University of Arizona, lists the learning tools Holbert developed. These include a reference binder about cochlear implants — Holbert's specialty area — and a library of 40 educational videos of clinical techniques and procedures that students can use to practice and reinforce learned concepts.

In addition to Holbert's teaching function, she plays a key role in advancing audiology research, according to Dr. Cevette. "Sarah works with the directors of Mayo Clinic's Aerospace and Vestibular Research Laboratory on experiments investigating spatial disorientation induced by galvanic vestibular stimulation, and is a co-investigator on a long list of research projects that have resulted in publications about cochlear implants and aerospace medicine. Holbert is an acknowledged expert in cochlear implants and communication technology. She presents at national conferences and co-invented a device to evaluate visual preference in vestibular disease and concussion."

Foremost, Holbert's contributions to audiology improve the lives of patients and families with hearing loss through direct patient care and mentorship of the next generation of clinicians.

"Working in audiology is inspiring because we have the chance to greatly impact lives by restoring the sense of hearing," says Holbert. "It doesn't get much better than that in medicine."



KNOW YOUR BOARD

7 questions with MCSHS Alumni
Association Board members

- 1. How did you become interested in health care?**
- 2. What drew you to your current role in health care?**
- 3. What valuable lesson did you learn at Mayo Clinic?**
- 4. How do you contribute to the MCSHS Alumni Association?**
- 5. What advice do you have for MCSHS students?**
- 6. What do you do in your spare time?**
- 7. What would people be surprised to know about you?**

Lidia Pomaville, PA-C (RAD '02)

Physician assistant-certified, Forefront Dermatology, Berwyn, Illinois

Education & career path:

Master of science in physician assistant, Wichita State University, Wichita, Kansas; bachelor of science in health arts, University of St. Francis, Joliet, Illinois; associate of science in radiography, MCSHS, Rochester Minnesota

Physician assistant-certified, 8 years in Illinois; CT technician, Mayo Clinic in Rochester, 3 years; X-ray technician, Mayo Clinic in Rochester, 3 years

1. My family emigrated from Russia when I was 16. We went to Rochester, Minnesota, because we had family there. While attending Mayo High School, I accompanied a friend to a MCSHS open house and talked to the Radiography Program director. I applied and was accepted. As a MCSHS student, I worked weekends as an X-ray records clerk in the basement at Mayo Clinic Hospital – Saint Marys Campus. After I graduated from the Radiography Program, I worked as an X-ray tech, floating all over campus.

2. Working at Mayo Clinic exposes you to many specialties. I met a lot of physician assistants and nurse practitioners and inquired about their jobs. In radiography, I missed developing relationships with patients. I wanted to advance my career to be part of longer-term patient care. A PA in neurosurgery inspired me to go back to school for my physician assistant degree.

I was diagnosed with melanoma at age 23. That experience got me interested in dermatology. I made sure it was one of my elective rotations in PA school.

I really love working in dermatology. I get to establish relationships with patients who have chronic conditions and care for patients who have surgical/procedural needs. After eight years I still see conditions that are new to me.

3. Never underestimate the importance of individuals who make up the team. We all have to work together, and doing so provides the best experience for the patient. Don't discount any team member.

4. I wanted to reconnect with people at Mayo Clinic for networking and inspiration to incorporate the Mayo Clinic values into my practice and the company I work for. I'm on an advisory committee for the company's PAs and NPs, focused on introducing best practices. I think I can give back to MCSHS by promoting Mayo Clinic values in my work.

5. It's OK to be uncertain about what you want to do for the rest of your life. Let education and experience shape your character and ambitions. When you are open to new ideas and opportunities, your true passion may reveal itself later in your career. Seek out a mentor, and never pass up a chance to mentor others. It will help you build relationships with your colleagues and develop a professional network that will open doors in your career.

6. My husband and I have three children, ages 3, 1-1/2 and newborn. Family life keeps us busy. We enjoy travel and the outdoors.

7. People detect a slight accent and want to hear about my journey from Russia. When we came to the U.S., I was an outsider. Everyone in high school seemed to have grown up together. It took some adjustment and learning before I could fit in. Overcoming challenges gave me grit and made me who I am. I appreciate the opportunities I've had throughout my life and career.





Know your Board continued

LaRissa Adams (RAD '11)

Quality specialist, Mayo Clinic in Florida

Instructor in radiology, Mayo Clinic College of Medicine and Science

Education & career path:

MBA, Saint Leo University, St. Leo, Florida; bachelor's degree, health care administration, St. Johns River State College, Palatka, Florida; Radiography Program, MCSHS, Jacksonville, Florida; associate's degree, Florida State College of Jacksonville

Quality specialist, Quality Management Services, 1 year; clinical coordinator, MCSHS Radiography Program, 3 years; cardiovascular technologist, 1 year; vascular interventional radiologic technologist, 3 years (all at Mayo Clinic in Florida)

1. I was a police officer in Jacksonville for four years when I was involved in a shooting incident in which a fellow officer was killed. Shortly afterward I found out I was pregnant and didn't want to risk my child losing his mother, so I decided to change careers. As a police officer, I helped people; I wanted to find a career where I could help people in a different way.

As a native of Jacksonville, I was well aware of Mayo Clinic and its reputation. I looked at the MCSHS programs, and radiography caught my eye. I especially liked interventional radiography, which requires precision and teamwork and sometimes has an adrenaline rush similar to that of police work.

I worked in interventional radiology and the cath lab before moving to education — teaching in the MCSHS Radiography Program. Throughout all of those roles, I had an opportunity to work with Mayo Clinic's Our Commitment to Safety program, which focuses on safety and quality improvement. That led to my current position. I work with various departments on quality improvement projects to support the practice.

While I sometimes miss patient interaction on the clinical side, I enjoy improving health care from a broader lens and impacting more patients overall.

2. It's important to recognize that we all have different perspectives, and they're all valuable.

3. I knew someone who was on the Board and decided it was a way to celebrate being a MCSHS alumna and foster camaraderie among our alumni.

Pam Lovett, the new president of the Alumni Association, is amazing — energetic and positive. We've had a couple of meetings to increase the presence of the Alumni Association on our campus, which resulted in an Alumni Day last fall. We've begun to collect data to help organize alumni on campus to participate in activities such as the heart walk, Katie Ride for Life for transplant awareness, and volunteering at the Gabriel House for transplant patients and families.

4. Never take for granted that you change lives every day when you go to work. Every interaction, greeting and smile affects others who are in a position of needing health care. It's not the same as needing to have your car washed or going to a bank. Our patients and their families need our help, so whatever your career choice in health care, our jobs matter every day for every patient.

5. My husband and I bought a fixer-upper house four years ago, so most of our time is spent doing remodeling. When I get free time, I love going to the beach and doing outdoor activities.

6. My father was a police sergeant, and my mom was a police dispatcher. I was raised to be a police officer.

Introducing voluntary dues

The MCSHS Alumni Association is asking alumni to contribute \$10 in annual dues. More money in the coffers will allow the Alumni Association to do more across all Mayo Clinic campuses for alumni and trainees.

- Visit mshsalumni.mayo.edu
- Click on Pay Dues

Thank you for your support!

Recruitment boost

Mayo Clinic School of Health Sciences enrolls more than 1,800 students annually in 135 programs representing more than 55 allied health professions at all three Mayo Clinic locations. Because program graduates fill critical staffing needs for Mayo Clinic, it's vitally important that each program enrolls a full complement of students. That's where Jolene Young, admissions recruiter for Mayo Clinic College of Medicine and Science, enters the picture.

For the last two years, Young has led MCSHS recruiting. Her efforts are augmented by those of program directors, faculty, staff and students who participate in outreach to attract students.

In 2018 Young and her colleagues participated in 265 recruiting events. Those activities included classroom presentations at and campus visits to high schools and colleges, college and health profession fairs, open houses on Mayo Clinic campuses and opportunities to observe health professionals on the job. A weeklong summer Career Immersion Program on the Rochester and Florida campuses allows high school juniors and seniors to explore allied health careers. All of these initiatives generate applications and students. A robust new website and social media presence enhance in-person recruiting efforts.

"Our goal is to give MCSHS programs diverse, competitive applicant pools so that program directors have cohorts of well-qualified students who are a good fit with MCSHS," says Young, who devotes special attention to programs in which Mayo Clinic has the greatest hiring need. Those include:

- Cardiovascular Invasive Specialist
- Clinical Neurophysiology Technology
- Cytotechnology
- Echocardiography
- Emergency Medicine Paramedic
- Histology Technician
- Medical Laboratory Science
- Nuclear Medicine Technology
- Pharmacy Technician
- Phlebotomy Technician
- Radiation Therapy
- Radiography
- Respiratory Care
- Sonography
- Surgical First Assistant

Recruiting efforts have paid off. Inquiries by email, phone and the website increased by 66% from 2017 to 2018. In the first six months of 2019, MCSHS already had more than 940 inquiries — almost twice as many inquiries as all of last year.

The influx of inquiries led to an increase in applications for some programs, including eight of those listed above. The Radiography Program on the Rochester and Florida campuses experienced a significant jump in applications, and the Cardiovascular Invasive Specialist Program on the Rochester campus had a record number of applications in 2019.

"Recruiting at MCSHS is collaborative," says Daniel Thompson, administrator of Enrollment Management, Mayo Clinic College of Medicine and Science. "Jolene leads us in this endeavor, and our program directors and others respond when she needs their expertise. We're all focused on the same goal, and everyone gives all they can. Interested students get the personal touch from MCSHS as you can see from the student vignettes that follow."



265
RECRUITING EVENTS



135
PROGRAMS



1,800
STUDENTS



55 ALLIED HEALTH
PROFESSIONS

Admissions
recruiter
Jolene Young
with MCSHS
Radiography
Program student
Abdimalik Adan
(RAD '20).



How'd you get here?

MCSHS STUDENTS SHARE THEIR RECRUITING EXPERIENCES



Stephanie's story

As a student at Inver Hills Community College in Inver Grove Heights, Minnesota, Charline (Stephanie) Nguimatsa (RAD '19) was interested in radiography. She'd been a nurse in her native Cameroon and wanted to pursue a different health care career. When the community college hosted a career fair, Nguimatsa went from booth to booth, inquiring if anyone offered a radiography program. Mayo Clinic School of Health Sciences had a booth at the fair and answered yes.

Nguimatsa had an associate's degree but needed two more classes before she could apply to MCSHS. She took those classes at Metropolitan State University in St. Paul, Minnesota.

After Nguimatsa applied to the MCSHS 24-month Radiography Program, the school gave her contact information for a student already in the program. Nguimatsa, who lived in St. Paul at the time, says it was helpful to learn about life in Rochester, housing, parking and curriculum from the student.

What sealed the deal for Nguimatsa was a conversation with her cousin, who is a physician in Paris, France. "I told him I was looking at different schools, and he told me to drop everything and move to Rochester," she says. "He said I would be lucky to train at Mayo and get a job there."

Lucky she was. Nguimatsa completed the Radiography Program in May and accepted a position at Mayo Clinic.

Photo above: Charline (Stephanie) Nguimatsa with Jessica Lodermeier, RT(R) (RAD '96), Radiography Program academic coordinator.



Momitul's story



Momitul Talukdar (NUMT '19) recently completed the yearlong MCSHS Nuclear Medicine Technology Program. She already had a bachelor's and master's degree when she became interested in nuclear medicine while working at a hospital in Ohio.

"I researched nuclear medicine technology programs online, focusing on the most reputable institutions," says Talukdar. "I looked at statistics, such as graduation and hiring rates, and how long the program has existed.

"All of the information I needed about the MCSHS program was on the website. An institution's online presence creates the initial impression. MCSHS's website includes current data and is visually appealing. That's not the case with all programs."

Talukdar says contacting the program director by email was easy, and their in-person interview was comfortable. "Our conversation was genuine and compassionate. Nothing felt scripted; I didn't feel like I was being sold on something."

Talukdar says another institution she interviewed with was pushy and didn't like that she was applying other places. "I knew in my gut it wasn't the right fit for me. Mayo had an impressive online presence, and its in-person presence didn't disappoint. I've worked at various hospitals and clinical settings, and I've never before seen anything like the Mayo Clinic culture."

Talukdar accepted a position as a nuclear medicine technologist at Carle Foundation Hospital in Urbana, Illinois, upon completion of her program.

Kristina's story



Kristina Monson (NUMT '19) became intrigued with nuclear medicine when she had surgery to remove a benign bone tumor as a teenager. In her final year at Eagan High School (in a suburb of the Twin Cities), she had an opportunity to arrange a semester-long job shadowing experience. She contacted the program director of the MCSHS Nuclear Medicine Technology Program, who agreed to be shadowed.

"I got to see what students were learning," says Monson. "That solidified my career choice, and I applied to the program.

"The number of patients and types of indications we see during training at Mayo are unparalleled. We perform scans that our peers at some other institutions only dream of doing. And we're taught by some of the leading physicians in the field. I'm so glad I decided to pursue my education here."



Do you know interested students?

MCSHS open house
Thursday, Oct. 10 | 5:30-7:30 p.m.
Phillips Hall, Siebens Building
Rochester campus



Peter Grahn, PhD, and
Megan Gill, PT, DPT

Independent stepping

Mayo Clinic has challenged its researchers to transform the practice of medicine with research that leverages multi-disciplinary expertise, technology and therapeutic advances to address unmet clinical needs. This story describes how one team has risen to the challenge, elevated the level of teamwork across disciplines and achieved novel results using spinal stimulation to enable function after spinal cord injury. The story focuses on two team members — both alumni of Mayo Clinic College of Medicine and Science schools.

The two first authors on a recent publication in *Nature Medicine* (“Neuromodulation of Lumbrosacral Spinal Networks Enable Independent Stepping after Complete Paraplegia”) have personal connections to the groundbreaking research they reported in the manuscript. Megan Gill, PT, DPT (PT '04), an alumna of Mayo Clinic School of Health Sciences who also has a doctorate in physical therapy; and Peter Grahn, PhD, a senior engineer in the Department of Neurologic Surgery and alumnus of Mayo Clinic Graduate School of Biomedical Sciences, have worked on a team of researchers from Mayo Clinic, UCLA and Houston Methodist during the last four years. The team has studied an emerging research approach to restore function in people with paralysis due to spinal cord injury. From a personal perspective, Drs. Gill and Grahn have each had a health-related event that affected their mobility.

The study

In 2014 a team of 15 Mayo Clinic scientists and clinicians from neuro-engineering, neurosurgery, and physical medicine and rehabilitation acquired internal funding to collaborate with V. Reggie Edgerton, PhD, of UCLA, to establish his team’s spinal neuromodulation approach at Mayo Clinic. The approach was developed in conjunction with Susan Harkema, PhD, from the University of Louisville. Building on Dr. Edgerton’s

work, the Mayo team designed the clinical trial protocol and acquired Mayo Clinic Institutional Review Board approval and an Investigational Device Exemption from the Food and Drug Administration (FDA). Mayo Clinic received FDA permission to use an electrical stimulation device for research purposes to study a condition not covered by its approved label. Co-principal investigators were Kendall Lee, MD, PhD, Department of Neurologic Surgery and director of Mayo Clinic’s Neural Engineering Laboratories; and Kristin Zhao, PhD, Department of Physical Medicine and Rehabilitation and director of Mayo Clinic’s Assistive and Restorative Technology Laboratory.

The Mayo Clinic team’s objective was to determine whether spinal cord circuitry could be modulated with electrical stimulation and rehabilitation to restore function lost to paralysis. Two patients with complete spinal cord injury were enrolled in the trial.

“Dr. Edgerton’s team showed us the ropes of how to program the epidural electrical stimulator so we could replicate what they’d achieved in their studies,” says Dr. Grahn. “During our initial programming session, the subject moved his leg using his own intent. When we observed this ability, everyone in the room gasped.”

The Mayo team replicated the UCLA team’s results within the first week of the study and continued to see what more they could achieve. They accomplished much more than basic leg movements.

Jered Chinnock, who injured his spinal cord at the thoracic vertebrae in the middle of his back in a snowmobile accident in 2013, was the first participant in the Mayo Clinic study. He had complete loss of function and feeling below the middle of his torso. Dr. Lee and his neurosurgery team implanted an electrode array in the epidural space at a specific location below Chinnock’s injury. The electrodes were connected to a pulse generator that was implanted near the patient’s abdomen. The generator communicates wirelessly to an external controller.

Chinnock participated in 113 rehabilitation sessions in the lab over 43 weeks in 2016 and 2017. Team members programmed the stimulator and recorded electrophysiology and biomechanical data. Dr. Gill led the physical therapy team and provided expertise about how rehabilitation with the device should occur. Team members provided Chinnock with physical assistance and used a body-weight harness to help him stand and step. With electrical stimulation, he was able to stand, swing his legs and shift his weight to maintain his balance. Because he didn’t regain sensation in his legs, Chinnock initially used mirrors to view his leg movement while rehabilitation team members provided verbal and tactile cues to describe his leg position, movement and balance.

The results

By the end of the study, Chinnock no longer needed a harness and had only occasional help from the therapists. He learned to use his body to transfer weight, maintain balance, and propel forward on a treadmill while using his arms on the support bars to help with balance. He required minimal verbal cues and periodic glances at his legs. He progressed to using a front-wheeled walker to step with minimal assistance from the team.

“I was surprised by the amount of motor activity Jered was able to do with stimulation,” says Dr. Grahn.

“Looking at past studies, we thought he may be able to stand without assistance and move his legs while lying down. No studies had shown that someone with complete paralysis could stand and take steps. With the stimulator off, the subject remains completely paralyzed below the level of his injury. These findings suggest that even the most severe cases of paralysis likely have some connections intact across the injury, and that neural networks below the spinal cord injury can be facilitated by epidural stimulation to restore functions such as standing and stepping. Altogether, these results support the concept that task-specific

rehabilitation performed during spinal stimulation can enable functional reorganization of the spinal cord to recover functions lost due to spinal cord injury.”

Dr. Grahn says the results generated by the Mayo team could be attributed to factors such as the subject’s specific injury, some aspect of the rehabilitation or key changes made to stimulator settings. Certainly, their findings have sparked more questions to investigate.

The team is endeavoring to further explore the use of epidural electrical stimulation and other emerging spinal neuromodulation techniques, combined with intense physical therapy, to help paralyzed patients regain function. A subsequent trial will help answer some of the unknowns from the first — to gain a better understanding of how and why the epidural electrical stimulation enables these functional gains and which patients will respond to stimulation.

Now that Chinnock is home in Tomah, Wisconsin, he works on an exercise program the Mayo team specified. He has approval to use the device for standing with a walker and to improve his trunk strength and balance during daily activities in his wheelchair.



Physical therapist Megan Gill (seated) and kinesiologists Daniel Veith and Margaux Linde assist Jered Chinnock as part of a clinical trial to determine if spinal cord circuitry could be modulated with electrical stimulation and rehabilitation to restore function lost to paralysis.

The personal connection

While it can't be measured as part of the data, Drs. Gill and Grahn say their personal experiences had a significant impact on their perspectives and dedication to the project.

Dr. Grahn has had quadriplegia due to spinal cord injury since 2005 and uses a powered wheelchair for mobility. When he was 18, he dove off of a dock in central Minnesota and hit the shallow bottom of a lake, fracturing the fifth vertebrae in his neck. He was instantly paralyzed and spent almost a year in rehabilitation.

Dr. Grahn, whose injury has affected his motor functions more than the patient in the Mayo Clinic study, says he felt a strong sense of excitement as Chinnock's abilities progressed during the study. "In the early stages of my own recovery, I admit there was a sense of jealousy when someone in the rehab gym with a similar prognosis as mine would recover to walk again. My point of view is different now. For the first couple of months after my accident, I thought if I worked hard enough at rehabilitation, I'd get better as I had with past sports-related injuries. Over time I realized my disability was permanent, and I experienced dark times during that period. Eventually I realized that life is full of challenges, and learning to live with my disability was one of those. I was also curious why the spinal cord doesn't heal.

"Fast forward 13 years, and I'm in a unique position to contribute to making discoveries and generating information to advance the research fields of neuromodulation and spinal cord injury. It was exciting to see the potential of what our patient could do when we turned on the stimulator. Our work demonstrates that spinal cord injury severity is more of a spectrum. We may be able to improve function even in severely injured patients who are diagnosed with the worst category of injury."

Dr. Gill says Dr. Grahn advocated for epidural stimulation research at Mayo Clinic. "Peter is a prime example of someone living to their greatest capacity. Never has his disability held him back. He has gained a deep understanding of the neuromodulation literature and has developed the skills to communicate this information to all team members regardless of the level of expertise in paralysis research. And because he has a spinal cord injury, he has unique understanding of our research subjects' situation."



Megan Gill,
PT, DPT

Megan Gill's story

When physical therapist Megan Gill was in high school, she got mononucleosis followed by pneumonia and an infection in the bone marrow of her leg. By the time the infection was identified, she was septic. Dr. Gill spent a week in the ICU. Within a year she had five debridements and 10 surgeries and wasn't allowed to bear weight.

"I wasn't very conscious but was told that I was at risk of losing my leg and that amputation was discussed," says Dr. Gill.

Nine months after her medical ordeal began, she started four months of physical therapy at Mayo Clinic. Her muscles had significantly atrophied and she'd lost 30 pounds.

"In one surgery, they took the back of my calf muscle and flipped it to the front of my leg," says Dr. Gill. "A nerve in my leg was pinched, so my ankle and toes were numb and I had a foot drop for a long time."

Dr. Gill says she had no interest in a health care profession as a result of her experiences. She changed her mind after taking anatomy and physiology courses in college, after which she enrolled in the MCSHS Physical Therapy Program

"My injury and surgeries are nothing compared to spinal cord injury, but I know the mental preparation that's required in a long recovery," says Dr. Gill. "I've been at Mayo Clinic for 14 years, specializing in spinal cord injury. I am grateful every day that I can walk, run and bike without thinking about it. We have patients who cannot get up and walk out of here. That drives me in my work.

"In the epidural stimulation study, I got to work with leading experts who came together for this project. We're working around the clock to further our research so we can alleviate the burden of these devastating injuries. We're optimistic about what the next five to 10 years will bring."

‘Average’ physical therapist is YouTube star

Physical therapist Bob Schrupp, PT (PT '85), is a YouTube star. His YouTube channel, Bob and Brad — “the two most famous physical therapists on the internet” — has a catalog of 1,700 videos, attracts 1,500 new subscribers a day and gets as many as 150,000 views a day. Several of Schrupp’s videos have more than 1 million views.

Schrupp completed the MCSHS Physical Therapy program in 1985 and worked as a physical therapist at Mayo Clinic in Rochester for three years before starting a practice in Winona, Minnesota. That practice, Therapy Network Inc., provides physical, occupational and speech therapy.

Schrupp describes himself as an introvert and not tech-savvy. His partner in practice and YouTube fame Brad Heineck, PT, is even less tech-savvy. How did two physical therapists from southern Minnesota become YouTube celebrities?

“We got in early and had a bit of luck,” says Schrupp. “When we started in 2011, there weren’t as many people producing videos for YouTube. Our timing was great — it was almost like a land grab. It would be harder to get started today.”

“Consistently creating good YouTube content is harder than people think as is speaking in front of a camera. Early on, it boggled our minds when even 20 people would watch and comment on a video we made.”

Initially the duo had no technical help. They pointed the camera at themselves and edited the resulting videos, learning one step at a time. Today they have a part-time employee who operates the camera and edits the videos. Schrupp’s grown children help with the Instagram (OfficialBobandBrad) and Facebook (Bob and Brad) presence. A YouTube consultant calls Schrupp with suggestions every couple of weeks.



Brad Heineck, PT,
and Bob Schrupp, PT





“We used to read and respond to every comment, but now we have 70,000 Facebook followers, so there are hundreds of comments a day,” says Schrupp. “Some of the best ideas for topics come from viewers. My daughter collects ideas from the comments and provides them to us.”

Schrupp says he enjoys teaching and can reach a large audience through YouTube. The countries with the most viewers of his channel are the U.S., the U.K., Canada, India, Australia, Philippines, Ireland, Germany and South Africa. “A lot of people who watch our videos have no access to medical care or can’t afford it. They rely on us to help them solve their problems.”

Come the day when Schrupp quits practicing, he says he’ll still make YouTube videos. In fact, he’s considering branching out to podcasting. “We’ll interview professionals from other medical specialties, such as pharmacy, orthopedics and podiatry, to provide people with more general medical information. We’ll conduct the interviews by phone and produce a video of us talking to them for the YouTube channel as well as audio-only for a podcast.”

According to Schrupp, people call from around the world, asking to come to his practice for care. “Even though we’re recognized as ‘famous’ when we’re out and about in our community, we’re just average therapists. We have plenty of patients; we want people to see physical therapists in their own communities. We do the videos to teach and share our knowledge and experience, not increase our patient load.”

Schrupp and Heineck record videos two days a week, pushing out eight new ones each week. Each partner comes up with and researches four topics a week, but the two don’t discuss those topics until five minutes before taping. “We like it to be spontaneous,” says Schrupp. “If we make mistakes, we keep going. That approach gives us authenticity.”

Schrupp spends three to four hours researching each topic. “I’m a better physical therapist because I’m constantly researching,” he says.

Schrupp credits Mayo Clinic with his professional success. “I owe everything to Mayo Clinic,” he says.

“I’m the fourth of 11 children, with parents who only went through eighth grade in school. We were very poor. After high school, I worked construction for a year. A friend of mine urged me to go to college with him, and he ended up not going. But I did. I concurrently completed a bachelor’s degree at Mankato State University and degree in physical therapy from MCSHS. It was a proud moment in my family when I was accepted at MCSHS. No one had gone to college before me. As a result of my showing that college was possible, all of my seven younger siblings went to college.

“Getting into a Mayo Clinic school boosted my self-confidence, and my education and experience at Mayo have served me well in life. Because of my clinical rotations at Mayo Clinic and three years working there, I was well qualified for practice. I owe a debt of gratitude to Mayo Clinic.”

Bob and Brad’s most-watched videos

- **Science Says 1 Minute of this Exercise = 45 Minutes of Jogging**
- **What is Causing Your Shoulder Pain? Tests You Can Do Yourself**
- **2 Sleeping Positions You Must Avoid**
- **15 Common Exercises You Should Never Do**
- **7 Exercises You Should Do Absolutely Every Day**
- **Ibuprofen vs. Aleve vs. Turmeric vs. Tylenol, Pharmacist Chris Compares**
- **60-Second Stretches to Get Knots from Shoulders, Upper Back and Traps**
- **Two 60-Second Exercises that Took Away My Shoulder Pain in 2 Weeks**
- **Epley maneuver: Performed on a Real Patient Suffering from Vertigo**
- **Tennis Elbow? Absolute Best Self-Treatment**

Come for the rotation, stay for the career

Some people prefer the path of least resistance. Nathan T. Smith, PharmD, RPh (APPE '17, PHSR '19), prefers to push himself.

Dr. Smith came to Mayo Clinic in Florida for a five-week Advanced Pharmacy Practice Experience rotation when he was a fourth-year doctor of pharmacy student at South Dakota State University in Brookings. He was paired with Caren Hughes, PharmD, RPh (PHARM '06), a pharmacist in hematology/oncology, who completed her residency at Mayo Clinic, worked at MD Anderson in Houston, Texas, for 10 years and has been on the Mayo Clinic staff for three years.

Dr. Smith says every day of that rotation was great. "Mayo Clinic is a welcoming learning environment, and everyone generously shared their time and expertise." Because Dr. Hughes was training a pharmacy resident at the same time, Dr. Smith says his learning was amplified. "I got to work closely with and learn in the same environment as the PGY1 resident."

Eight months later Dr. Smith was back at Mayo Clinic for a PGY1 residency, paired again with Dr. Hughes. "Because I'd already benefited from her training, she bumped things up to the next level of complexity. Dr. Hughes provided an individualized environment where the sky was the limit in terms of what was possible for me to learn, and I pushed myself to get as much as I possibly could out of the residency. It far exceeded my expectations."

Dr. Smith happily accepted a clinical staff pharmacist position on Mayo Clinic's Rochester campus and started his new position in July. The Iowa native is now closer to friends and family.

"I want to keep pushing myself to advance my knowledge and career," says Dr. Smith. "I want to be involved in all aspects of the profession — advising patients, performing research, presenting at professional meetings and advancing the practice of pharmacy — and I think Mayo Clinic is the perfect place to do that."

He also wants to get involved with the residency program. "I've always had a passion for teaching," says Dr. Smith. "I was inspired to see how much the pharmacists at Mayo Clinic in Florida are involved in teaching. I want to share my experience and knowledge with future generations to help them build great careers in this amazing profession like Caren Hughes and so many others did for me."



Caren Hughes, PharmD, RPh, and Nathan T. Smith, PharmD, RPh



Mid-life career change

PUTS MARTHALANE RYAN RIGHT WHERE SHE WAS MEANT TO BE

When Marthalane (Martha) Ryan, MBA, RN (PON '11), walked into Mayo Clinic on the Arizona campus for her first day of work in 2008, she says she felt like she was home.

Ryan took prerequisite courses for nursing — her mother's profession — during her first two years of college but was spooked away from the career. "I started thinking about what it would be like when a patient died, and I got scared," she says. "I was only 19. I spent the next two decades in careers adjacent to health care, but I never quit thinking about nursing."

Ryan got a bachelor's degree in health care administration and went to work in employee benefit sales and provider network development. She earned an MBA and pursued a career in industry — as a director of managed care, vice president for a health care technology company and sales rep for a laboratory test company.

"Working in lab sales got me excited about the clinical side of medicine again," says Ryan. "I was very successful in my career and made great money, but I felt like something was missing. There's more to life than money. I wanted to do what I felt called to do."

Ryan took the prerequisites she needed and then enrolled in the nursing program at Arizona State University. Upon completion, Ryan applied only at Mayo Clinic in Arizona. "I knew a lot about Mayo Clinic from my years on the industry side of health care," she says. "I decided if I was going to work as a nurse, I wanted to work where they do it right."

Ryan worked in Mayo's cardiac inpatient program for almost three years, during which time she completed a fellowship in perioperative nursing at Mayo Clinic School of Health Sciences on the Arizona campus. "I've always wanted to work in the operating room," she says. "It's a high-stress environment — perfect for my type-A personality."

She was a surgical nurse for five years before taking a position in the Pain Clinic. Ryan job-shares with another nurse: every other week in the Pain Clinic and every other week teleworking — answering the nurse triage line for Pain Clinic patients and checking messages in the patient portal system.

"I love assisting physicians with procedures such as spinal cord stimulators, radiofrequency ablation and epidurals," says Ryan. "The resilience of our patients who cope with pain every day is inspiring."

Ryan says her career experience helps her precept other nurses. "Life experience can't help but make you a better teacher," she says. "I love sharing what I know to broaden the skill set of others. Teaching helps me have a bright, fresh perspective and open mind."

Ryan encourages others considering a career switch to pursue it. "Don't let the opportunity go by if you really want it. It's humbling in that you have to start all over and learn new skills, but it's challenging and exciting. I'm doing the job I feel I am wired to do. Mayo Clinic is a great place to be a nurse."





Former lab tech welcomes change and challenge of sonography

Jacy Saterbak, RVT, RDMS (SONO '18), had his first overnight on-call duty as a sonographer at Mayo Clinic. As he sat down for dinner with his roommates, his pager went off. He made the 15-minute drive to Mayo Clinic Hospital – Rochester, Methodist Campus while fighting nerves.

“It’s the same ultrasound exams I do during the day, but there’s something about being called in after hours that felt different,” he says.

After imaging a patient who was about to get a pancreas transplant, Saterbak returned home. He and his roommates settled in to watch a movie, and Saterbak’s pager went off again. He returned to the hospital to image another transplant patient — a liver this time.

He made the trip home and back to the hospital two more times — a suspected deep vein thrombosis and a kidney transplant — before his scheduled shift at 8:30 the next morning.

“The roads are pretty quiet in the middle of the night, so you have time to gather your thoughts in preparation for work,” says Saterbak, who started his sonography job in May 2018.

Before working in sonography, Saterbak was a laboratory technologist in the Toxicology Lab at Mayo Clinic. After a few years in that role, he became restless.

“I liked my job in the lab and the people I worked with, but I knew exactly how my eight-hour shift would go,” he says. “I felt like I wasn’t being challenged and wanted to explore my options.”

Saterbak, who studied chemistry at the University of Wisconsin-River Falls, decided to pursue sonography

at Mayo Clinic School of Health Sciences, taking advantage of Mayo Clinic’s employee tuition reimbursement program.

“For financial reasons, I wanted a program I could complete in two or fewer years,” says Saterbak. “I like that sonographers are on the diagnostic frontlines of medicine — helping physicians answer questions in some cases and eliminate diagnoses in other cases. We’re often one of the first steps in the diagnostic journey.”

Saterbak says the 21-month MCSHS sonography program was challenging. “You learn from a textbook and practice on your classmates, but then you have to do exams on real patients in one of the largest ultrasound departments in the world. I gained confidence by getting through the program.”

During his first year as a sonographer, Saterbak got as much experience in as many areas of Mayo Clinic as he could. He is about to get even more experience, serving patients at the Federal Medical Center (Federal Bureau of Prisons) in Rochester.

“My sonography mentor Robert Hyde (RVT, RDMS) has 40 years of experience, so he’s seen and done it all,” says Saterbak. “He suggested I’d be a good fit to work in the prison practice. I’m easygoing and comfortable in my own skin, which tends to make patients comfortable. I provide the same care to all patients regardless of their background.”

Saterbak likes the challenges and variety of sonography. “I never know what I’m going to find or what the patients will be like,” he says. “I like not knowing how my shift will unfold.”

ROCHESTER

Outstanding educators

Each year Mayo Clinic School of Health Sciences honors excellence in faculty and staff. Congratulations to the 2019 honorees from the Rochester campus.

Outstanding Educators

- **Helga Olson, CSA**
Division of Surgical Services
Instructor in nursing
- **Emily Scanlan, R EEG T (CNT '06)**
Department of Neurology
Instructor in neurology
- **Jenna Steege, APRN, CRNA, DNP (NA '14)**
Department of Anesthesiology and Perioperative Medicine
Instructor in anesthesiology

Outstanding Physician/Scientist Educators

- **Stephen Broski, MD**
Division of Musculoskeletal Radiology
Department of Radiology
Assistant professor of radiology
- **Joseph Maleszewski, MD**
Division of Anatomic Pathology
Department of Laboratory Medicine and Pathology
Professor of laboratory medicine and pathology and medicine

Outstanding Service Award

- **Bella Panchmatia, MS, RN**
Associate dean of Health, Wellness, and Sciences
Georgian College, Barrie, Ontario, Canada
Former operations manager
Mayo Clinic School of Health Sciences, Arizona
- **Jolene Young**
Admissions recruiter
Mayo Clinic College of Medicine and Science



Read Q&As with Outstanding Educator alumnae Scanlan and Steege at mshsalumni.mayo.edu.





Front row: Jenna Steege, APRN, CRNA, DNP; Joseph Maleszewski, MD; Jolene Young; Stephen Broski, MD; Bella Panchmatia, MS, RN
Back row: Brad Karon, MD , PhD (associate dean, Academic Affairs, MCSHS); Emily Scanlan, R EEG T; Michael Silber, MB, ChB (dean, MCSHS);
Helga Olson, CSA; Stacey Rizza, MD (associate dean, Faculty and Student Affairs, MCSHS)

News briefs



Richard Gray, MD, named CEO of Mayo Clinic in Arizona

The Mayo Clinic Board of Trustees elected Richard Gray, MD, as CEO of Mayo Clinic in Arizona. He succeeds Lois Krahn, MD, who served as interim CEO after CEO Wyatt Decker, MD, retired in December 2018.

Dr. Gray is a professor of surgery in the Mayo Clinic College of Medicine and Science. He was recognized as Mayo Clinic Distinguished Educator of the Year in 2013. His research focuses on

breast cancer, sarcomas, melanoma, and reducing pain in treatment and recurrence after treatment.

Dr. Gray came to Mayo Clinic in Arizona in 1995 as a surgical intern and completed his residency and fellowship in surgical oncology at Mayo Clinic in Arizona. After a second fellowship in surgical oncology at the Moffitt Cancer Center in Tampa, Florida, Dr. Gray joined the Mayo Clinic staff in 2001.

Mayo Clinic's recent rankings

No. 1 *Newsweek* "World's Best Hospitals"

Ranked No. 1 in the world by *Newsweek* in list of the "World's Best Hospitals."

No. 9 in *Forbes* "America's Best Large Employers"

Ranked No. 9 by *Forbes* in list of "America's Best Large Employers."

"Most Wired" health care organizations

Recognized among "Most Wired" hospital and health care organizations by College of Healthcare Information Management Executives. Key factors for recognition include cybersecurity, value-based care and patient engagement.

"Employer of Excellence" for physician assistants

Selected as an "Employer of Excellence" by American Academy of Physician Assistants Center for Healthcare Leadership and Management in recognition of practices that create positive work environments for physician assistants and collaboration among care teams.

"Top 50 Workplaces for Indigenous STEM Professionals"

Selected as one of "Top 50 Workplaces for Indigenous STEM Professionals" by American Indian Science and Engineering Society in recognition of overall diversity recruitment efforts and recruiting within indigenous populations for occupations within science, technology, engineering and math (STEM) fields.

Poster session promotes scholarly activity

In April MCSHS faculty, students, program directors and administrators presented 40 posters showcasing knowledge from 10 allied health professions at the eighth poster event on Mayo Clinic's Rochester campus.

Audiology extern Dennell Benson (AUDX '19) presented "The Effect of Disease Duration on Tests of Hearing and Balance in Patients with Meniere's Disease" to determine which tests provide the most useful information in this patient population.

"Meniere's disease was first described in 1861, and we're still searching for a definitive pathophysiological mechanism and treatment," says Benson. "My research shows that some vestibular laboratory tests are more sensitive than others in tracking progression of Meniere's disease. It is our hope this information will be useful to track and guide treatment."

Photo: Matthew Hastreiter, PT, DPT (PT '19), Mayo Clinic Health System - Mankato, Minnesota



MCSHS alumni in the Department of Cardiovascular Medicine at Mayo Clinic in Rochester joined their colleagues and family members in Adopt-a-Highway roadside cleanup. Participants included Kathleen Griffin, RDCS (ECHO '08); Bruce Daniels, RDCS; Andrew Moore, MD; Nathaniel Taggart, MD; Laurie Anderson, RDCS; Teresa Pfeifer, RCS (RAD '93, ECHO '00); Julie Illies, RDCS (ECHO '97); Renee Blohowiak, RDCS. Daniel McCullough, RDCS (RAD '03, ECHO '05), took the photo.

Awards & appointments

Lauren Aziz (ADMIN '16), Department of Laboratory Medicine and Pathology at Mayo Clinic in Florida, received a Practice Innovation Award from the Mayo Clinic Robert D. and Patricia E. Kern Center for the Science of Health Care Delivery for her project "BMT/CAR-T Digital Transformation." Award recipients will work with the Kern Center's multidisciplinary team of experts to identify complex care needs for patients, address unmet clinical needs, and improve the experience and delivery of health care.

Emily R. Black, APRN, CNP (DIT '15), nurse practitioner in the Center for Palliative Medicine at Mayo Clinic in Rochester, received a Mayo Clinic Karis Award. This award recognizes the many caring persons who live out the Mayo Clinic values in an extraordinary way as they serve patients, visitors and colleagues. Black is an instructor in medicine and nursing in the Mayo Clinic College of Medicine and Science.

Lynn Borkenhagen, APRN, CNP, DNP (NP '98), nurse practitioner in the Division of Community Internal Medicine at Mayo Clinic in Rochester, was granted associate status. Associate status is granted to individuals who are not members of the physician or administrative staff but who contribute on a continuing basis in unusually important ways to the practice, research and educational activities at Mayo Clinic. Dr. Borkenhagen is an assistant professor of medicine in the Mayo Clinic College of Medicine and Science.

Michael Huckabee, PhD, program director of the Physician Assistant Program on the Rochester campus, was recognized by the American Journal of Nursing. His book "Clinical Leadership for PAs and NPs" was awarded third place in the 2018 AJN book awards in the Nursing Management & Leadership category. The book also was the Subject Category Winner for Nursing and Allied Health by the Association of American Publishers honoring scholarly works published in 2018.

Jane Linderbaum, APRN, CNP (NP '97), director of NP/PAs in the Division of Structural Heart Disease at Mayo Clinic in Rochester, received the Mayo Clinic Enterprise NP/PA Distinguished Educator Award on behalf of Enterprise NPPA leadership. The award recognizes her longstanding contributions to NPPA education and 20 years of leading a highly successful internal medicine CME course. "Internal Medicine Review for Nurse Practitioners, Physician Assistants and Primary Care Physicians" was Mayo's first course designed for NPPAs. Linderbaum is an associate professor of medicine in the Mayo Clinic College of Medicine and Science.

Samantha Linscheid (RTS '19), graduate of the Respiratory Care Program on the Rochester campus, received the BSHP Patient Care Award at the University of Minnesota Rochester Raptor Awards ceremony. The award goes to a Bachelor of Science in Health Professions student who exemplifies the personal and professional attributes needed to be an effective patient care provider.

Pamela Lovett, APRN, CRNA, DNP (NA '03), CRNA supervisor of Anesthesia Operations at Mayo Clinic in Florida, was appointed assistant professor of anesthesiology in the Mayo Clinic College of Medicine and Science. Dr. Lovett is president of the MCSHS Alumni Association.

Erin E. Martin, APRN, CRNA, DNP (NA '05), nurse anesthetist at Mayo Clinic in Rochester, received the 2019-2020 Education Science Career Development Award from the Mayo Clinic Office of Applied Scholarship and Education Science (OASES). Dr. Martin is an instructor in anesthesiology in the Mayo Clinic College of Medicine and Science.

Noweeda Mirza, PhD (ECHO '19), student in the MCSHS Echocardiography Program at Mayo Clinic in Arizona, received the Alan D. Waggoner Scholarship Award from the American Society of Echocardiography. The award recognizes outstanding academic and personal accomplishments. Dr. Mirza also is a research associate in the Department of Cardiovascular Diseases.

Natalie Terhark (ECHO '19), student in the MCSHS Echocardiography Program in Rochester, received the Katanick Scholarship Award from the American Society of Echocardiography. The award is presented to the highest ranking student sonographer candidate nominated for any ASE Foundation scholarship awards.



MCSHS nuclear medicine technology students earned first place at the Central Chapter Society of Nuclear Medicine and Molecular Imaging Battle of the Minds Quiz Bowl competition in Oak Brook, Illinois. Students in Mayo's program have competed five times (2014, 2015, 2016, 2017 and 2019) and have earned first place in four of those years. The most recent win makes MCSHS teams the most winning of all time in the competition.



MCHS respiratory care students Samantha Linscheid (RTS '19), Tori Simonson (RTS '19), Abdulahi Ahmed (RTS '19) and Michael Edge (RTS '20, not pictured) won the state Sputum Bowl competition in Minneapolis. They will compete in the Sputum Bowl Nationals in November in New Orleans at the American Association for Respiratory Care meeting. A MCHS team last won this national knowledge bowl in 2016. Good luck, students!



Nuclear medicine technology students Momitul Talukdar (NUMT '19), Makayla Anfinson (NUMT '19), Eliza Dobbe (NUMT '19), Dana Karlstad (NUMT '19), Margaret Cantlon (NUMT '19), Danielle Caine (NUMT '19), Angela Weiler (NUMT '19) and Kristina Monson (NUMT '19).



Mayo Clinic receives \$32 million gift to advance research

A \$32 million gift from the Anna-Maria and Stephen Kellen Foundation will enable Mayo Clinic to expand its research mission with the construction of a four-story, 64,000-square-foot research building in Rochester.

Planning for the Anna-Maria and Stephen Kellen Building is underway, with groundbreaking expected in 2020 and occupancy in 2022. The building will be located just north of Mayo Clinic's Opus Building. The new building will add to downtown Rochester's Discovery Square — the research, innovation and development hub of the Destination Medical Center initiative.

Anna-Maria and Stephen Kellen, now deceased, received care at Mayo Clinic for decades. Stephen Kellen was president and CEO of Arnhold and S. Bleichroeder Inc., an international investment firm based in New York, now known as First Eagle Investment Management LLC.

"Our family's history with Mayo Clinic spans more than four decades, and the physicians and staff at Mayo have become like family to us," says the couple's daughter, Marina Kellen French. "We are thrilled to be able to support Mayo and be part of advancing medical research that will help patients for decades to come."

Program updates

Lauren Alexander, MD, Department of Radiology at Mayo Clinic in Florida, is medical director for the Radiography Program in Florida.

Michael Breunig, PA-C (PA '12), physician assistant in the Division of Hospital Internal Medicine at Mayo Clinic in Rochester, is the clinical skills co-director of the Physician Assistant Program. Breunig is an assistant professor of medicine in the Mayo Clinic College of Medicine and Science.

Justin Gagneur, MA, TRP, is program director for the Medical Physics Residency Program in Arizona. Gagneur is an instructor in radiation oncology in the Mayo Clinic College of Medicine and Science.

S. Allen Luis, MBBS, Division of Cardiovascular Ultrasound, Department of Cardiovascular Medicine at Mayo Clinic in Rochester, is medical director for the Advanced Cardiovascular Sonography Program.

The Nurse Practitioner Clinical Residency Program is now the Nurse Practitioner Clinical Education Collaboration. The name change signifies MCSHS's collaboration with regional nurse practitioner academic programs to educate as many nurse practitioners as possible. Universities participating in the collaboration include Winona State University, Viterbo University (La Crosse, Wisconsin), University of Minnesota and University of Wisconsin-Eau Claire. Students in this program will be guaranteed placement for all required clinical rotations at Mayo Clinic sites in the Midwest.

Daniel McCullough, RDCS (RAD '03, ECHO '05), is echo supervisor in the Division of Cardiac Ultrasound at Mayo Clinic in Rochester. He has 20 years of service at Mayo Clinic including 14 as a cardiac sonographer in the Rochester Echo Lab.

Danielle O'Laughlin, PA-C, MS (DIT '13), physician assistant in the Division of Employee and Community Health at Mayo Clinic in Rochester, is clinical skills co-director of the Physician Assistant Program. O'Laughlin is an assistant professor of medicine in the Mayo Clinic College of Medicine and Science.

Sarah Schettle, PA-C, MS (PA '10), physician assistant in the Department of Cardiovascular Surgery at Mayo Clinic in Rochester, is clinical development co-director for the Physician Assistant Program. Schettle is an assistant professor of surgery in the Mayo Clinic College of Medicine and Science.

Arthur (Travis) Shelton, PharmD (PHARM '09), is program director for the Pharmacy Residency and Clinical Rotations Program in Arizona. Dr. Shelton is an instructor in pharmacy in the Mayo Clinic College of Medicine and Science.

Brittany Strelow, PA-C, MS (DIT '15), physician assistant in the Division of Community Internal Medicine at Mayo Clinic in Rochester, is clinical development co-director for the Physician Assistant Program. Strelow is an assistant professor of medicine in the Mayo Clinic College of Medicine and Science.

Connections

Connections is published three times a year and mailed free of charge to alumni, students and friends of Mayo Clinic School of Health Sciences (MCSHS).

Send comments, story ideas, academic and career news, and address changes to mshsaa@mayo.edu, or call 507-284-2317.

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Mayo Clinic School of Health Sciences has a distinguished history of preparing students for successful careers in the health sciences. Mayo Clinic has trained allied health professionals for more than 100 years. Almost 1,700 students are enrolled in more than 135 MCSHS programs and rotations representing more than 55 health sciences careers. Programs are available at Mayo Clinic campuses in Arizona, Florida and Minnesota.

Enrollment information

mayo.edu/mayo-clinic-school-of-health-sciences

507-284-3678, 1-800-626-9041

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Mayo ranked among ‘Best Children’s Hospitals’ by *U.S. News & World Report*

Mayo Clinic Children's Center has again been ranked as one of the top-performing children's hospitals in Iowa, Minnesota, North Dakota and South Dakota in *U.S. News & World Report's* 2019–2020 "Best Children's Hospitals" rankings.

Rankings of 191 of the nation's pediatric centers identify the top 50 in each of 10 specialties. Mayo Clinic Children's Center ranked as a top performing children's hospital in 6 of 10 pediatric specialties. Mayo Clinic's rankings by pediatric specialty are:

- Cardiology and Heart Surgery (No. 30)
- Diabetes and Endocrinology (No. 15)
- Neurology and Neurosurgery (No. 32)
- Orthopedics (No. 24)
- Pediatric Gastroenterology and GI Surgery (No. 44)
- Urology (No. 36)

