

ALUMNI

MAYO CLINIC ISSUE 2 2017

PHYSICIAN
WELL-BEING

BURNOUT
PREVENTION

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SOOD, M.D.
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LETTER FROM THE SECRETARY-TREASURER

The theme of this issue of *Mayo Clinic Alumni* is taking care of the physician or scientist. Physician burnout is a major national problem. Mayo Clinic leads the country in research on this important matter and is a pioneer in taking organizational steps to reduce burnout.

Research shows that finding meaning in your life's work and having time to spend on the areas you find most rewarding are vital to physician satisfaction and burnout prevention. Mayo Clinic's Values Council establishes a foundation for our primary value — the needs of the patient come first — and helps to remind us why we pursued careers in medicine.

In addition to reading about our Values Council in this issue, you'll learn about Mayo Employee Resource Groups (MERGs), which can help staff members feel more at home; our Physician Health Center, which helps to ensure the health and well-being of the physician workforce around the country; resiliency and its role in burnout prevention; and our Healthy Living Program for Physicians, an immersive CME program to improve physicians' awareness of the relationships among lifestyle habits, diet, physical activity, resilience, stress management and health. You also will find information about steps organizations can take to improve and prevent physician burnout as well as how Mayo Clinic School of Medicine and the Mayo Fellows' Association are combatting this problem.

While we don't have all the answers, we do put a high priority on the well-being of our staff and all those who care for our patients.

Also in this issue are profiles of our Balfour and Kendall research award recipients. Both are risk-takers — in the course of their careers, in the subjects of their research and in other ways. We're proud that they've chosen to be affiliated with Mayo Clinic. We also include a feature on alumnus Kofi Boahene, M.D.



PETER AMADIO, M.D. (OR '83)

- Secretary-Treasurer, Mayo Clinic Alumni Association
- Lloyd A. and Barbara A. Amundson Professor of Orthopedics

(ENT '04), a head and neck surgeon at Johns Hopkins. His story, which was featured on CNN a few years ago, is a study in determination.

Finally, registration is open for the Alumni Association Biennial Meeting in Florida in October. We have a fantastic multidisciplinary scientific program prepared for you. Plus you'll have a front-row seat to check out all the great things happening on our Florida campus. Contact someone you trained with, a current or former alumnus colleague, a mentor or a friend, and plan to attend together. You'll have opportunities to reconnect with fellow alumni and become reinvigorated in the Mayo spirit. You never know — attending might be a positive step in taking care of yourself and keeping burnout on the back burner. I'll be there, and I hope to see you there.

A handwritten signature in white ink, which appears to read "Peter Amadio".

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EMPOWERING THE KEEPERS OF THE FLAME

Mayo Clinic Values Council



“It has been our desire to maintain at Rochester an institution in which medical and surgical treatment may be had by anyone, without regard to financial status, race, color, or creed — all meeting on a common level.” – William J. Mayo, M.D.

The Mayo Clinic Values Council is charged with promoting Mayo’s institutional values throughout the organization, and promoting and perpetuating the Franciscan legacy in the Mayo Clinic Hospital – Rochester, Saint Marys Campus.

The Values Council was established in 2013 to replace the Sponsorship Board when Saint Marys and Methodist hospitals became a single licensed hospital entity. The Sponsorship Board was focused primarily on the Saint Marys Campus.

‘NO SMALL CHARGE’

Keeping intact the values of a large organization is no small charge. Robert Brown Jr., M.D. (MED ’87, N ’92), chair of the Division of Stroke and Cardiovascular Diseases, chair of the Values Council and the John T. and Lillian Mathews Professor of Neuroscience, says the group isn’t actually the keeper of Mayo’s institutional values. “All 65,000 of us at Mayo are the keepers of our values and values-driven culture, along with our 30,000 alumni around the world. The Values Council provides resources and assists in the promotion and protection of our values across all three shields.”



ROBERT BROWN JR., M.D.

'UNYIELDING DEDICATION TO PRIMARY AND CORE VALUES'

The Values Council reports administratively to the Program in Professionalism and Values and to the Mayo Clinic Board of Governors annually.

That the Values Council reports to the Board of Governors is an indication of how seriously Mayo takes the perpetuation of its core beliefs, according to Dr. Brown. "Mayo Clinic's primary value — the needs of the patient come first — has been in place for more than 100 years," he says. "Our unyielding dedication to our primary and core values helps to define why we have a Values Council. This may be where we differ from some other medical institutions. If you ask Mayo employees what our primary value is, most of them will be able to tell you."

The council focuses on how to make the values come to life in the actions and behaviors of employees. The group makes presentations to departments and work units, and provides curriculum and tools to empower work groups to understand and promote the values.

"You can't teach values the way you would a scientific topic," says Dr. Brown. "We provide the resources to get the discussion started regarding our values and their importance to all of our behaviors as individuals and as an institution. Mayo Clinic has 3,000 to 5,000 new employees each year. How do we assist them in understanding our culture and values and integrating the values into our expectations of them? That's where the Values Council comes in."

'ONGOING CHALLENGE' TO ALIGN DECISIONS AND BEHAVIOR WITH VALUES

"Medicine today is very complex, and Mayo is a much larger institution than it was in the past," Dr. Brown continues. "We have an ongoing challenge to make sure our institution's decisions and behaviors are aligned with our professed values. I believe Mayo's values are evident to patients and visitors to our locations. If we can continue to have our primary and core values be the guiding principles of what we do and help our employees find purpose in their work, we'll continue to have the strong, values-driven culture we've had for more than a century. This remains a key differentiator for Mayo Clinic."▲

"We have an ongoing challenge to make sure our institution's decisions and behaviors are aligned with our professed values." – Robert Brown Jr., M.D.

Charge of the Values Council

- Promote Mayo Clinic values across all of Mayo Clinic.
- Assist in perpetuating the Franciscan legacy on the Saint Marys Campus.
- Foster aligned partnerships with related programs, offices and activities across Mayo Clinic.
- Continue and enhance the work of the former Sponsorship committees — Education Committee, Research Committee, Values Review Committee and Pilgrimage Program.

Primary value

- The needs of the patient come first.

Core values

- **Respect:** Treat everyone in our diverse community including patients, their families and colleagues with dignity.
- **Integrity:** Adhere to the highest standards of professionalism, ethics and personal responsibility, worthy of the trust our patients place in us.
- **Compassion:** Provide the best care, treating patients and family members with sensitivity and empathy.
- **Healing:** Inspire hope and nurture the well-being of the whole person, respecting physical, emotional and spiritual needs.
- **Teamwork:** Value the contributions of all, blending the skills of individual staff members in unsurpassed collaboration.
- **Innovation:** Infuse and energize the organization, enhancing the lives of those we serve, through the creative ideas and unique talents of each employee.
- **Excellence:** Deliver the best outcomes and the highest quality service through the dedicated effort of every team member.
- **Stewardship:** Sustain and reinvest in our mission and extended communities by wisely managing our human, natural and material resources.

FAST 5

DR. BROWN

1 | Do other organizations have groups like Mayo's Values Council?

No, this is unusual. Most organizations have core values. Unfortunately sometimes they're not taken very seriously and are not used to guide an organization's actions and decisions. At Mayo we take our values very seriously and have the Values Council in place to make sure they're promoted, perpetuated and protected among all employees in practice, education and research, in good times and in tough times. We're intentional about our values-driven culture and have maintained our values even as we've grown tremendously and evolved over the last 150 years to be a world-renowned medical center.

I like to think this is what differentiates Mayo. It's why patients say they feel something special here they've never felt before at a medical institution — because we mean what we say and put action and commitment behind the statement. When you're at Mayo, you see that dedication in colleagues across all three shields. The feeling is palpable.

2 | Is the Values Council associated with religion?

No. We do perpetuate the Franciscan legacy at the Saint Marys Campus, given the extreme importance of the Mayo-Franciscan partnership from the time Saint Marys was built in the late 1880s to the current time. Also, importantly, through our healing core value, we respect that some of our patients have a spiritual connection, whether it's religious or not, as part of their lives.

3 | How did you become the first medical director of the Values Council?

I've been at Mayo for 34 years. I had the opportunity to train here and previously served in several leadership roles, including chair of the Department of Neurology. When the Values Council was forming, I was asked to become the medical director. It was a tremendous honor to be asked because I'm passionate about the importance of these values to Mayo Clinic — to our past, to the present and to our future.

4 | How were Mayo's values inculcated in you?

I learned a tremendous amount from the mentors who educated me and who I observed throughout my training. As a medical student, I interacted with physicians, scientists and allied health colleagues and had the opportunity to see how they put the Mayo values in action through their behaviors across all three shields. The impact of mentorship and learning from colleagues across all disciplines in all three shields cannot be overstated. Observing my colleagues day in and day out during medical school, residency and beyond molded me as a clinician, educator and researcher and taught me the values.

Our values are part of our culture and integral to our institutional DNA. There's a feeling at Mayo that you succeed when you help your colleagues succeed, and that could not be truer. I surely benefited from that via tremendous mentorship throughout my training and career. I couldn't imagine having completed my training or having my career anywhere else.

5 | How can Mayo's values affect physician satisfaction and counter burnout?

A key issue in reducing burnout is defining meaning in your work and enhancing engagement. For many of us, meaning in our work is based on Mayo's primary value — the needs of the patient come first — and on our core values. Lessening burnout is a multifaceted issue, including important institutional factors. We must provide an environment in which all Mayo colleagues feel they can live out the primary and core values.

MERGS CAN MAKE YOU FEEL AT HOME

Mayo Employee Resource Groups



The India Mayo Employee Resource Group (MERG) at Mayo Clinic in Rochester helps Ekta Kapoor, M.B.B.S. (I '08, ENDO '12), Divisions of General Internal Medicine and Endocrinology, Diabetes, Metabolism, & Nutrition, stay connected to her culture. She and her husband, Prashant Kapoor, M.D. (HEM '09, HEMO '12), Division of Hematology, are from India, and they want to keep that perspective alive for their children.

"I grew up in India and came to the U.S. in 2003," she says. "I love working here, and our family has embraced living here. But I want to stay connected to my roots and keep my cultural background and values alive in my mind — this is my identity. This is the information I want to pass along to my kids as well."

Part of the Office of Diversity and Inclusion, Mayo Employee Resource Groups (MERGs) are groups of employees across locations who collectively and actively engage or gather around a unifying purpose, mission, background or activity. The India MERG meets quarterly. The approximately 135 members engage in professional development activities and plan activities and get-togethers.

"Many women in the group have children around the same ages as mine, and there is

tremendous opportunity to learn from others' parenting experiences," says Dr. Kapoor.

"Belonging to the MERG also helps me stay connected with the community outside of work and manage work-life balance. Our MERG provides opportunities for community service, and members share values, dreams, ambitions and a common mission, and we help each other achieve those missions."

Dr. Kapoor says she's gotten so much out of the India MERG that she's considering joining the Greater Leadership Opportunities for Women (GLOW) MERG. "I value interacting with and learning from people in similar situations — professional or personal. It provides a sense of solidarity, builds self-confidence and helps with problem-solving."

Anjali Bhagra, M.D.

(I-1 '05, I '08), also is a member of the India MERG and a department diversity leader for the Division of General

Internal Medicine. She's presented to the MERG about stress management, resiliency and women in leadership. "I like contributing to my colleagues' wellness and sense of belonging," she says. "MERGs are valuable resource groups outside of your regular work area, and provide opportunities to support others and lean on others for support." ▲



EKTA KAPOOR, M.B.B.S. (LEFT),
AND ANJALI BHAGRA, M.D.



Members of the India MERG gathered at Mayo's annual Festival of Cultures. (From left) Aparna Velamala, Data Programming Services; Sneha Vivekanandhan, Mayo Clinic Graduate School of Biomedical Sciences; Poorval Joshi, Ph.D. (MPET '16), Yale University School of Medicine; Pavithra Bora; Sonu Kashyap, Ph.D.

(LABM '15), Department of Laboratory Medicine and Pathology; Sumathi Jayakumar, Media Support Services; Nalini Krishnan, Management Engineering & Internal Consulting; and Sandhya Devarajan, M.B.B.S. (ONCL '17), Division of Medical Oncology.

About MERGs

- Employees, trainees and students from throughout the organization can participate. Membership in a MERG is voluntary.
- MERGs support Mayo's diversity and inclusion strategies and goals.
- The Mayo Clinic Office of Diversity and Inclusion approves and coordinates MERG programs and events, and provides tactical, administrative and oversight support.
- Meetings take place outside of regular work hours or during lunch.

Mayo Clinic MERGs include:

- African Descendants
- ALMA (Hispanic/Latino culture and heritage)
- Arab Heritage
- Asian Connection
- Caribbean Heritage
- Celebrate Dakota!

- Chinese
- disABILITY
- eMERGING Leaders
- Filipino
- FRESH (Family Resource, Event and Support Hub)
- Greater Leadership Opportunities for Women (GLOW)
- India
- Influence, Inspiration, and Growth Professional Development Group
- Iranian Heritage
- Latinos y Latinos (Hispanic)
- LGBTI (lesbian, gay, bisexual, transgender, intersex or allies)
- Multicultural Nurses
- Pan-Africa
- Somos Latinos
- Transcultural Patient Care
- Veterans





LEADER OF THE PACK IN REMEDIATING PHYSICIAN BURNOUT



A health care organization's health is profoundly affected by the well-being of its physicians. In the last two decades Mayo Clinic has taken a leadership position in studying physician burnout and crafting and testing strategies to halt its encroachment on physician health. In the spirit of the maxim "Physician, heal thyself," Mayo has made demonstrable, sustained progress in improving burnout among its physician corps.

Earlier this year Tait Shanafelt, M.D. (HEMO '05), Division of Hematology at Mayo Clinic in Rochester and director of the Mayo Clinic Program on Physician Well-being, and John Noseworthy, M.D. (N '90), Mayo Clinic president and CEO, co-authored "Executive Leadership and Physician Well-being: Nine Organizational Strategies to Promote Engagement and Reduce Burnout," which was published in *Mayo Clinic Proceedings*. Here, *Mayo Clinic Alumni* synthesizes that article.

SCOPE OF THE PROBLEM

- Physicians are under constant pressure to increase productivity — caring for more patients with unchanging time and resources, and expectations to improve efficiency and reduce expenses. "Do more with less" is the mantra.
- National studies indicate that at least 50 percent of U.S. physicians experience professional burnout, which is characterized by exhaustion, cynicism and reduced effectiveness at work.
- Physician burnout has increased during the last decade and is dramatically higher than burnout in other professions.
- Specialties with the highest rates of burnout include family medicine, general internal medicine and emergency medicine.



“When you look at the national physician burnout problem, it’s like the shoemaker’s children going barefoot. In addition to caring for our patients, we need to devote attention to caring for our caregivers.”

– John Noseworthy, M.D.

EFFECTS OF BURNOUT

- Physician burnout affects quality of care, patient safety, physician turnover, physician work effort and patient satisfaction. Burnout also affects physician prescribing habits and test ordering, risk of malpractice suits and patient compliance with physician recommendations.
- Regarding work effort, a Mayo Clinic study showed that every 1-point decrease in physician satisfaction (on a 5-point scale) was associated with a 30 to 40 percent increase in the likelihood the physician would reduce his or her work effort during the next 24 months. The cost of replacing a physician is estimated to be two to three times the physician’s annual salary.
- Burnout also has personal repercussions including broken relationships, alcoholism and physician suicide.

These significant negative effects make the case for health care organizations to monitor and try to improve physician burnout.

“If you knew your organization had an issue that threatened patient care quality and satisfaction, not to mention physicians’ lives and livelihood, you would quickly deploy resources to address the problem,” says Dr. Noseworthy. “We exist to provide medical care to our patients — to try to improve their overall health. When you look at the national physician burnout problem, it’s like the shoemaker’s children going barefoot. In addition to caring for our patients, we need to devote attention to caring

for our caregivers. Promoting physician well-being is central to the wellness of our entire organization. Healthy, engaged physicians are necessary to achieve our objectives.”

Dr. Noseworthy says most institutions put the burden of improving burnout and professional satisfaction on the individual physician, expecting them to take self-help steps to address the problem. In reality, however, the burnout problem has organizational, personal and national aspects, and the responsibility to fix it should be shared by health care organizations and their employees.

Organizational factors that play a role in burnout are workload, efficiency, flexibility and control over work, work-life integration, alignment of individual and organizational values, social support and community at work, and degree of meaning derived from work.

Rather than simply reduce burnout, Mayo strives to cultivate physician engagement, characterized by vigor, dedication and absorption in work.

“Small investments in physician engagement can have a large impact,” says Dr. Noseworthy. “Leadership and sustained attention from the highest level of the organization are the keys to making progress.”

CASE IN POINT

Between 2011 and 2013 Mayo’s physician burnout rate ticked up from lower than average to similar to the national rate. Improvement efforts implemented between 2013 and 2015 resulted in a decrease of 7 percent while the national rate increased by



JOHN
NOSEWORTHY,
M.D.

11 percent. Today Mayo’s physician burnout rate is 32.9 percent compared to 48.8 percent nationally.

While pleased with the improvement, Dr. Noseworthy isn’t content. “With one-third of our physicians affected, we have more work to do,” he says. “Dr. Shanafelt and his colleagues in our Program on Physician Well-being continue their dogged pursuit of research and trials of strategies to effectively stem the tide of burnout. We embrace our organizational responsibility to continue to evolve in an effort to improve the well-being of both our physicians and Mayo Clinic.”



PHYSICIAN BURNOUT RATE





Research indicates that physicians who spend at least 20 percent of their professional effort focused on the aspect of work most meaningful to them are at a dramatically lower risk for burnout.

ORGANIZATIONAL STRATEGIES

1 | Acknowledge and assess the problem

It's important for the highest level of leadership to acknowledge physician burnout. CEOs can engage with physicians through face-to-face meetings, video interviews, town halls and radio broadcasts. Physician well-being must be measured as a routine institutional performance metric.

"Organizations measure what they consider most important to their success," says Dr. Shanafelt. "Physician well-being should be one of those measures."

Mayo Clinic has measured physicians' professional satisfaction since 1998 and has measured burnout since 2010. Other aspects of well-being Mayo measures annually and compares to national data include engagement and satisfaction with work-home integration. Division and department heads receive aggregated results to know where to deploy attention and resources.

2 | Harness the power of leadership

Desirable qualities in physician leaders include the ability to listen, engage, develop, motivate and organize fellow physicians. Physician leaders are responsible for identifying the talents and motivators of the physicians on their teams. Research indicates that physicians who spend at least 20 percent of their professional effort focused on the aspect of work most meaningful to them — caring for a specific type of patient or a particular health condition, or activities such as patient education, community outreach, mentorship or teaching — are at a dramatically lower risk for burnout.

In addition to developing physician leaders with the skills necessary to lead, organizations must measure leader performance.

Mayo Clinic physicians have the opportunity to evaluate the leadership of their immediate supervisors annually, a measure that is used in leaders' performance reviews. Mayo research shows that each 1-point increase in the leadership score of a physician's immediate supervisor is associated with a 3.3 percent decrease in the likelihood of the physician's burnout.



COLIN WEST,
M.D., PH.D.

3 | Develop and implement targeted interventions

Many of the contributors to burnout and solutions are work unit-specific rather than institution-wide.

Mayo Clinic identified divisions and departments with satisfaction rates lower than the national average and burnout rates higher than the national average, and engaged those units to determine areas for improvement. Of seven units involved in this process in 2013, all seven had improvement in burnout and satisfaction. The interventions were local, based on the units' specific needs.

4 | Cultivate community at work

Physicians' sense of community has been eroded by rising productivity expectations, increased clerical and documentation burdens, and the elimination of physician-dedicated spaces such as lounges and dining rooms. Those spaces allowed for interpersonal connections and organic peer support, and getting rid of them contributed to many physicians feeling more isolated.

Organizational strategies are necessary to unite physicians and create opportunities for support.

In 2001 Mayo Clinic in Rochester introduced a dedicated meeting area for physicians, scientists and senior administrators, complete with free fruit and beverages, lunch tables, food for purchase and computer stations. The space was so well received that similar areas were added on the Florida and Arizona campuses, and a second room was added on the Rochester campus.

Mayo also added a physician-support program, COMPASS (Colleagues Meeting to Promote and Sustain Satisfaction). In COMPASS groups, also known as Physician Engagement Groups, physicians spend one hour every other week meeting with colleagues. These groups of six to 10 physicians meet for a meal paid for by Mayo Clinic and discuss specific subjects related to being physicians.

Studies led by Colin West, M.D., Ph.D. (I '03, CMR '04), associate director of the Mayo Clinic Program on Physician Well-being, indicate the meetings have led to improvement in meaning-in-work measures and burnout. As a result, Mayo made COMPASS groups available to all physicians and



Potential impact of burnout on U.S. physician workforce

- The U.S. Department of Health and Human Services predicts a shortfall of 45,000 to 90,000 physicians by 2025.
- The Association of American Medical Colleges predicts that in less than 10 years the U.S. will have 90,000 fewer physicians than it needs.
- The shortage may be more acute in specialties such as primary care and general surgery.
- Higher emotional exhaustion (a dimension of burnout) is associated with increased likelihood that physicians will reduce their professional work effort.
- The prevalence of burnout is increasing among U.S. physicians.
- The increase in burnout between 2011 and 2014 likely translated into an approximate 1 percent reduction in the professional effort of the U.S. physician workforce due to physicians reducing work hours — the equivalent of eliminating the graduating class of seven U.S. medical schools. That estimate doesn't account for physicians leaving the profession altogether or retiring early due to burnout.
- Reducing professional work effort appears to be an effective strategy for individual physicians to reduce burnout but could exacerbate the pending physician workforce shortage.



Online story

In fall 2012 we profiled then-residents Cadman Leggett, M.D. (I '12, CI '13, GI '15), and Jane Njeru, M.B., Ch.B. (I '12, PCIR '13), in a story about physician burnout. Five years later we check in with these Mayo Clinic faculty members to learn how their stresses have changed and how they manage work-home life balance.

<https://alumniassociation.mayo.edu/news/>

scientists across the enterprise. In the first 10 months about one-third of physicians and scientists across the organization joined a COMPASS group.

5 | Use rewards and incentives wisely

Physicians who are incented to be more productive may spend less time with each patient, order more tests or procedures, and work longer hours. Evidence suggests the behaviors associated with these incentives worsen quality of care and increase the risk of burnout.

Mayo Clinic uses a salaried compensation model to counter this issue although other approaches also may be effective. Rather than offer extra financial compensation for productivity, rewards to consider include schedule flexibility or protected time for pursuits including research and education that add meaning to work.

6 | Align values and strengthen culture

Mayo Clinic regularly asks physicians and staff to evaluate how well it meets its mission — the needs of the patient come first. This appraisal helps to make sure the organization's culture, values and principles are aligned with its mission.

A 2011 staff survey revealed that Mayo physicians perceived organizational erosion in commitment to staff. Mayo convened a task force of physicians and scientists to study the problem and pinpoint the areas that needed the most improvement. Over 18 months the task force led activities that articulated Mayo's values in surveys and focus groups.

This process of value alignment affirmed that the organization and its physicians were working toward a common goal, and created a touchstone document that delineates the principles of that partnership.

7 | Promote flexibility and work-life integration

U.S. physicians are twice as likely to be dissatisfied with work-life integration as workers in other industries. Full-time medical practice can be prohibitive to the integration of personal and professional life.

Organizations can offer reduced work hours, in exchange for reduced compensation, and schedule flexibility to allow physicians to better meet the obligations in both parts of their lives. These can be important recruitment and retention strategies as well as contributors to physician well-being and satisfaction.

8 | Provide resources to promote resilience and self-care

Opportunities and resources for physicians to practice well-being must be accompanied by organizational efforts to improve systemic problems that contribute to burnout. This helps to ensure that the issue isn't physicians themselves but, rather, a multifaceted consideration that largely focuses on the organization and system. Such a model of shared accountability, with the organization addressing the aspects it is responsible for, often makes physicians more open to resources such as resiliency training (page 22) and other self-care offerings.

With respect to self-calibration, Dr. Shanafelt says evidence shows that physicians respond to objective data that help them compare their well-being and distress with that of other physicians, which can be motivation to make changes to promote well-being. An added benefit — research shows physicians who take good care of themselves are more likely to recommend self-care to their patients, including good sleep habits, exercise, nutrition and preventive health care (page 26).

9 | Facilitate and fund organizational science

Mayo Clinic established its Program on Physician Well-being in 2007 to provide evidence-based strategies that reduce burnout and promote physician engagement. These efforts have resulted in approximately 100 peer-reviewed publications. Other institutions recently have made efforts to reduce burnout and promote engagement a priority.

Mayo Clinic encourages more institutions to become involved in this organizational science that has a profound effect on patient care quality and satisfaction, access to care and, ultimately, the health of the health care delivery system.

"Executive Leadership and Physician Well-being: Nine Organizational Strategies to Promote Engagement and Reduce Burnout," *Mayo Clinic Proceedings*, January 2017

links.mayo.edu/mcpburnout



Tell us about your experience with burnout — how you prevent it, how you've worked through it, what resources your employer provides — or what you'd like to know about burnout. We'll share some of the responses on our website.

mayoalumni@mayo.edu

STRATEGIES TO PREVENT BURNOUT IN NEXT GENERATION OF PHYSICIANS

Mayo Clinic is providing resources to help the next generation of physicians cope with the pressures of the profession.

"Burnout is more common than depression among medical students and residents, and recent data show they have higher prevalence of depression than age-similar adults in the general population," says Liselotte Dyrbye, M.D. (CIM '01), associate director of the Mayo Clinic Program on Physician Well-being and a consultant in the Division of Primary Care Internal Medicine. "In the U.S. about half of medical students and residents show classic signs of burnout — emotional exhaustion, detachment and a feeling that their efforts don't make a difference."



LISELOTTE
DYRBYE, M.D.

THRIVE for medical students

Mayo Clinic School of Medicine developed THRIVE, a program to reduce student distress such as compassion fatigue, alcohol abuse and anxiety before it becomes more problematic.

THRIVE is a **T**raining program composed of five parts: a **H**umanistic approach to medicine, **R**esilience training, **I**ndividualized academic success, and **I**nnovation for long-term **V**ocational **E**xcellence. THRIVE strives to train and sustain future physicians in medical school, residency and beyond. It includes many strategies that are bearing fruit, as evidenced by improved measures of student distress compared to national peers and as assessed by the Medical Student Well-being Index — a tool developed at Mayo.

"We aim to develop a new generation of physicians who will learn how to mitigate their own risk of burnout and help teach these principles to other members of the health care team as well as patients," says Alexandra Wolanskyj-Spinner, M.D. (I '95, HEMO '98), senior associate dean for student affairs, creator of the program and a consultant in the Division of Hematology.

Second-year M.D./Ph.D. student Erin Triplet says the importance of taking care of herself has been emphasized since her first day of medical school. "It's abundantly clear that this is a priority for the school's administration, and they want us to make it a priority, too."

THRIVE resources — most of which have been expanded to other schools in the Mayo Clinic College of Medicine and Science in Rochester, Arizona and Florida — include:

- An academic success coach linking students to peer tutors, alternate study resources for nontraditional learners and help developing study schedules during particularly stressful academic periods.
- A mental health counselor and testing performance coach for students with significant testing anxiety and other concerns.



Medical students learn mindfulness and yoga during orientation as part of THRIVE.

- A life and wellness director who meets with students individually and in groups to promote wellness.
- A disabilities and accommodations office for students requiring testing accommodations and special resources.
- Programming in partnership with the Mayo Clinic Center for Humanities in Medicine.

Mayo WELL for residents and fellows

The Mayo Fellows' Association, with support from Mayo Clinic School of Graduate Medical Education, developed the Mayo WELL Program to promote trainee wellness and combat burnout.

Mayo WELL has four focus areas:

- **Well Community** — Community service events and family-centered activities.

- **Nourish Well** — Healthy cooking classes and pop-up lunches.
- **Living Well** — Chair massage days, painting on canvas outings, fitness and yoga classes, and mindfulness happy hours.
- **Thinking Well** — Guided wellness discussions with an accompanying dinner at local restaurants.

"The Mayo WELL events I have attended have been very well received and enjoyable," says George Saffouri, M.D. (I '15, GI '18), a gastroenterology fellow and president of the Mayo Fellows' Association. "It's great to see a community of trainees — who are often restricted to their own little niches and bubbles — come together for fun activities. Mayo WELL is an evolving program still in its infancy, but I hope these efforts are helping to combat the overarching problems that stem from burnout." ▲

MAYO CLINIC PHYSICIAN HEALTH CENTER



*Caring for the physician workforce,
one physician at a time*



PHILIP HAGEN, M.D.

It's no secret that physicians aren't necessarily good at taking care of their own health needs. Demands of the practice, sensitivity about seeing a colleague, embarrassment about not being a model of health — Mayo Clinic research reveals a lot of reasons physicians aren't getting needed care. Physician illness negatively affects the entire health care system, not to mention individual physician well-being. Ensuring the health and well-being of the physician workforce is an important public health issue and a top Mayo Clinic priority.

In 2015 Mayo Clinic established the Physician Health Center on the Rochester, Minnesota, campus. The center provides preventive, wellness, illness- and injury-related services, and occupational assessments for physicians.

LAYING THE GROUNDWORK, DETERMINING NEEDS

To properly assess physician attitudes about their own health care needs, Mayo Clinic researchers conducted two surveys, two years apart. The results revealed that:

- Many physicians equate illness with weakness.
- Many physicians do not have primary care providers.
- Many physicians, especially women, report challenges in accessing health care, including sufficient time, concerns about confidentiality and a lack of care appropriate to their needs.
- Physicians tend to self-diagnose, self-prescribe and self-treat.
- One in two physicians experiences a major health issue by age 50.
- Physicians have a significantly higher risk of dying from suicide than the general population.
- Physicians often work while sick to avoid disappointing patients and colleagues.
- Almost half of physicians have been concerned about a colleague being able to safely practice due to illness including substance abuse, psychiatric disorders, heart disease, neurological disease and cancer.
- Physicians who practice healthy behaviors are better able to motivate patients to be healthy.

"Many of the factors cited by physicians as obstacles to getting the health care they need are modifiable and demonstrate a clear need to address physician health in a systematic fashion," says Philip Hagen, M.D. (MED '83, I '86, PREV '88), medical director of the

Ensuring the health and well-being of the physician workforce is an important public health issue and a top Mayo Clinic priority.

Physician Health Center and a consultant in the Division of Preventive, Occupational, and Aerospace Medicine. "We've taken care of our own physicians for decades and believe our approach is well-suited to address physicians' unique concerns and needs. We want to make it easy for physicians to get the care they need. The Physician Health Center considers physicians as an occupational group with particular characteristics and needs, including discretion, confidentiality, professional respect and minimal time away from work."

SERVING PHYSICIAN-PATIENTS

The Physician Health Center provides services including:

- **Preventive services:** Easy access to preventive care including mammography, colonoscopy, lab testing, physical exams and immunizations. *A physician is in Rochester for a CME course and calls the Physician Health Center to have an overdue mammogram during a break from her course.*
- **Care for routine health concerns** *A physician has diabetes and hyperlipidemia, is developing progressive degenerative joint disease of a knee and needs an eye refraction — and would like all concerns to be addressed in a concise visit.*
- **Care for acute or serious conditions** *A procedural physician has cancer and requires an ongoing treatment program, tailored to her schedule and sensitive to safe patient care.*
- **Occupational assessment for specific conditions:** Personalized evaluations for conditions that may affect the ability to practice medicine safely. Occupational medicine specialists evaluate the physician's ability to practice, and medical specialists evaluate conditions and provide treatment recommendations. When appropriate, evaluations are arranged in Mayo's Multidisciplinary Simulation Center or

another simulated practice setting to assess the physician's ability to perform procedures. These comprehensive evaluations typically take two to four days.

A surgeon faints in the operating room. His practice wants him to have an evaluation to make sure he is fit to safely operate on patients. Immediacy is important because his absence from the practice has a significant impact.

A middle-aged physician shows signs of cognitive decline and is referred by her practice for an evaluation. It's determined that she has early-onset dementia. She's advised what to do about her practice and is provided with medical recommendations to improve her quality of life.

- **Training in the Mayo Clinic Healthy Living Program for Physicians (page 26):** A CME course with hands-on instruction in physical activity, nutrition, resiliency and mind-body connection. Physician participants develop individualized wellness plans for themselves, which will help them guide patients in making similar behavior changes.



Getting lessons in nutritious cooking in the Mayo Clinic Healthy Living Program for Physicians are (from left) Sofia Ali, M.D., Allina Health, St. Paul, Minnesota; LaTonya Hickson, M.D. (NEPH '08), Division of Nephrology and Hypertension, Mayo Clinic in Rochester; and Donald Northfelt, M.D. (HEMO '02), Division of Hematology and Medical Oncology, Mayo Clinic in Arizona.

Last year the Physician Health Center saw approximately 100 physicians from around the U.S. for services other than preventive. According to Dr. Hagen, about one-third of those were referred by their practices due to a concern about a health problem that may have affected their ability to safely practice. The most common reason for occupational assessments has been a change in cognition or function.

"We have an aging workforce, and physicians commonly practice into their 60s and 70s," says Dr. Hagen. "I've had very difficult conversations with physicians who have cognitive decline or another condition that will prohibit them from practicing as they've been accustomed to. These conversations are made somewhat easier because my specialty-care colleagues also present their findings and treatment recommendations. I think it's reassuring to physician-patients when they realize someone cares about their personal condition and treatment, not only their fitness for practice."

Confidentiality is a concern for many physicians. Dr. Hagen says the Physician Health Center discusses expectations with physicians who are referred for assessments, their employers and other stakeholders. "We decide in advance which information goes to whom — employers, state boards, liability insurers and disability insurers."

Dr. Hagen says he wants physicians to know that the Physician Health Center is a comprehensive resource for the full range of physicians' health care needs — from the routine to the most complex.

"Physicians who have trained at Mayo Clinic, in particular, know the benefits of our multidisciplinary approach and patient-first model of care. We apply those same principles to caring for 'our own' — physicians themselves. Keeping the physician workforce healthy is a top priority for us."

mayoclinic.org/physicianhealthcenter ▲



MAYO GETS SMART

ABOUT RESILIENCY FOR BURNOUT PREVENTION



Mayo Clinic takes a SMART (Stress Management and Resiliency Training) approach to addressing the individual components of physician burnout. New physicians, nurses and medical students at all locations are required to complete a course in resiliency as part of their training.



AMIT SOOD, M.D.

Amit Sood, M.D. (ADGM '05, CLRSH '06), Division of General Internal Medicine at Mayo Clinic in Rochester and chair of the Mayo Mind Body Initiative, developed the SMART program, which teaches skills to train attention and interpretations and “right wire” the brain.

In several published studies SMART has been found to be effective for improving stress, resilience, anxiety, quality of life and mindfulness. And in yet-to-be published studies, SMART has shown efficacy for improving happiness, health behaviors and burnout in health care employees.

RELIEVING STRESS

Dr. Sood describes stress as a load that’s a necessary part of life. Relieving stress requires decreasing the load and building resiliency to improve the ability to lift the load.

Decreasing the load entails organizational involvement (page 8) in interventions such as reduced work hours, optimized patient volumes, reduced administrative burden and better management of other duties.

Building resiliency involves improving the individual ability to withstand and bounce back from adversity. Resilience-building correlates with positive physical health, mental well-being, better relationships, and work performance in observational studies and controlled clinical trials, according to Dr. Sood.

“Although resilience can be an innate personality trait, it also can be cultivated,” he says.

GETTING SMART

The SMART approach is adapted from Attention and Interpretation Therapy (AIT) and combines neuroscience, evolutionary biology, psychology and philosophy. The program’s three core components are awareness, attention and attitude/mindset.

SMART postulates that the brain networks are organized into two modes in which the brain alternates: focused and default mode. Focused mode is engaged when a person is doing something enjoyable and immersive. Default mode is when the mind wanders and focus is distracted.

The human brain can be in default mode for more than half of the day. During this time people mostly focus on neutral or negative thoughts, generating

stress. “The default state of the brain, with its propensity to wandering attention, perpetuates the stress response,” says Dr. Sood. “At the end of a busy, stressful day, a physician often spends considerable time passively thinking about work instead of spending relaxing time with family. This can be negative and unproductive. SMART helps break this pattern and replaces automatic stressful thinking with productive and positive thoughts and more intentional presence.”

Dr. Sood explains that stressful thinking is ingrained. “Just a few hundred years ago the most common cause of mortality was external injuries. Ancestors who paid attention to external threats had a greater chance of survival. But now we spend more time mind-wandering than truly noticing the world outside of us.”

Emerging research shows that excess default-mode mind-wandering may predispose a person to attention deficit, post-traumatic stress disorder, depression and cognitive decline. SMART strives to help people spend more time in focused mode.

“Research shows that the human brain gets tired after 60 to 90 minutes of sustained cognitive effort, particularly when doing something it doesn’t enjoy,” says Dr. Sood. “Cognitive fatigue is very common if we do not organize our work day around resting our brain about every two hours.” Fatigue manifests in ways including reduced focus, irritability, a desire for stimulants such as coffee, and a decline in performance and engagement. Untreated fatigue can lead to exhaustion and health consequences including stroke and even death.

SMART promotes a discipline of giving the brain short periods of rest before fatigue occurs — relaxing and experiencing uplifting emotions and motivation.

FOCUSING INTENTIONAL ATTENTION

To overcome the brain’s default tendencies, SMART promotes developing intentional attention, which is deeper, better focused and sustained. Because many people struggle with deep attention, SMART advocates brief spurts of one to three minutes instead of long practices. These short “meditations” contain an element of positive emotion that increase their effectiveness:

- **A morning gratitude** — Before you get out of bed in the morning, think about and send silent gratitude to five people who you know care about you or who you care about.
- **The two-minute rule** — Give at least two minutes of undivided attention to one person who deserves such attention but isn't getting it.
- **Curious moments** — Notice one new thing in the world around you every day.
- **Kind attention** — Send silent good wishes to people you meet or see during the day.

The total time invested in these attention exercises is only five to 10 minutes per day. SMART also offers paced-breathing meditations for participants interested in more conventional practice.

OPTIMIZING ATTITUDE/ MINDSET

Because human thinking is often judgmental, SMART guides participants to use the following five core principles to reorient and optimize their thinking and attitude:

1. **Gratitude:** Acknowledgment of and appreciation for life's blessings; habitually seeking out the positive aspects of life. In observational studies gratitude is associated with better physical and emotional health. Prospective studies show that intentionally practicing gratitude has a significant and meaningful effect on several well-being measures, particularly positive affect.
2. **Compassion:** Feeling another person's suffering, which may translate into action to relieve suffering. Practicing compassion includes self-compassion, which is associated with greater well-being. Several prospective studies show that learning and practicing compassion can improve life satisfaction.

3. **Acceptance:** Involves working creatively with what is and expending the energy to fight the problem instead of fighting the self; recognizes and internally accepts human limitations in influencing an outcome. Practicing acceptance enhances objectivity and flexibility. Several studies have validated positive physical and emotional health effects of practicing acceptance.

4. **Meaning:** Finding meaning in life — personal and professional — helps to connect daily actions with larger purpose. Meaning also equips individuals to do difficult and repetitive tasks that might otherwise be boring. Pursuing higher altruistic meaning has advantages including improved health and better psychosocial adjustment to adversity.
5. **Forgiveness:** Acknowledging misconduct that has happened and choosing to let go of the hurt for one's own benefit. Giving up bitterness has been shown to improve blood pressure, sleep, immunity, heart rate and overall stress.



"Trained attention is deep, relaxed and purposeful," says Dr. Sood. "Attention training takes effort but, with effort, it can become hardwired and incrementally easier. Trained interpretations help you think productively, overcome negativity quicker and have more energy to pursue higher meaning. When combined, trained attention and interpretations gift you with greater joy and resilience."

Dr. Sood emphasizes that these exercises don't take time away from work or leisure. In fact, he says greater freedom from inward-focused ruminations can help free up extra time every day. ▲



THE TOTAL TIME INVESTED IN THESE ATTENTION EXERCISES IS ONLY FIVE TO 10 MINUTES PER DAY.

A PLACE FOR PHYSICIANS TO FOCUS ON THEIR OWN WELL-BEING

MAYO CLINIC HEALTHY LIVING PROGRAM FOR PHYSICIANS



Jean Fox, M.D. (GI-MO '01), a consultant in the Division of Gastroenterology and Hepatology at Mayo Clinic in Rochester, has three sons, ages 13, 12 and 8, two dogs, and a surgeon husband — Henry Schiller, M.D. (S '01), chair, Division of Trauma, Critical Care & General Surgery. Between home and work, she has many demands on her time.

“As physicians, we aren’t always good at taking care of ourselves because we’re busy taking care of others,” she says. “I want to be the best I can be. When time was tight, I would skimp on self-care and cheat myself out of sleep and neglect exercise. This is something I try not to do anymore. Being healthy and well is necessary for me to be my best as physician, parent and spouse as well as more attentive to my patients.”

When Mayo Clinic introduced a Healthy Living Program for Physicians, Dr. Fox was among the first to sign up. “I wanted to see what it offered,” she says.

What Dr. Fox gained during the hands-on, two-and-a-half-day CME course includes a new appreciation for non-exercise activity thermogenesis (NEAT), healthy food preparation tips, ways to improve her balance and posture, ideas for incorporating meditative minutes into her day and the importance of getting seven to eight hours of sleep.

The immersive course accommodates 15 physicians from various specialties and geographic areas. “Everyone brought a different perspective, but we face similar challenges and time constraints,”





Abigail Stockham, M.D. (RADO '14) (right), and LaTonya Hickson, M.D. (NEPH '08) (left), exercise in a physical activity class as part of the Healthy Living Program for Physicians. Dr. Stockham is in the Department of Radiation Oncology and Dr. Hickson in the Division of Nephrology and Hypertension — both at Mayo Clinic in Rochester.



JEAN FOX, M.D.

says Dr. Fox. “Our group had a lot of camaraderie, and everyone was encouraging of each other. I tend to be introverted but felt comfortable in the informal atmosphere. I learned from the questions my colleagues asked. A course run by physicians for physicians was appealing to me.”

Also appealing to Dr. Fox was the CME nature of the course. “I can learn ways to take better care of myself and learn to help educate my patients,” she says. “Many of my patients with functional GI conditions have comorbidities such as anxiety, depression and fibromyalgia. I’m more comfortable talking to them now about sleep, stress management, meditative practices and physical activity. I also feel more informed about the general Healthy Living Program that patients can enroll in at the Dan Abraham Healthy Living Center and am more likely to recommend it.”

THE EVOLUTION

Mayo Clinic’s Dan Abraham Healthy Living Center has been home to wellness training and activities for employees since 2007. The Healthy Living Program offers classes for patients and their families, employees and the public that focus on diet, physical activity and resiliency. These individualized, evidence-based wellness training programs aim to improve long-term health and quality of life.

In 2016 the Healthy Living Program expanded to a physician-specific audience — in the form of the CME course.

Donald Hensrud, M.D. (I ’87, PREV ’89), Division of Preventive, Occupational, and Aerospace Medicine, and the C. Michael and Elizabeth A. Kojaian Director of the Mayo Clinic Healthy Living Program, says physicians are trained in the disease model but not necessarily in wellness and health promotion. The Healthy Living Program for Physicians was designed to improve physicians’ awareness of the relationships among lifestyle habits, diet, physical activity, resilience and stress management, and health — both for themselves and their patients.

“Physicians face the same challenges as everyone else, including making sustainable health improvements,” he says. “Working directly with physician participants, we believe we can help them integrate healthier practices into their lives, prevent burnout and enable them to better assist their patients in making similar lifestyle changes. When people think of Mayo Clinic, they think of complex medical conditions or a place of last hope. We want also to be thought of as the place to go for wellness. It isn’t just for well people. Everyone, including patients with medical conditions, needs practices that promote wellness.”

Dr. Hensrud says feedback from physicians who have participated in the program is excellent. “They’ve said the quality and value are outstanding. We invite our alumni around the world to consider the Mayo Clinic Healthy Living Program for Physicians. It can be a much-needed respite from day-to-



DONALD
HENSrud, M.D.

day practice, a burnout-prevention strategy, or a way to address a particular wellness need such as weight loss or a blood pressure problem. We want physicians to know it's OK — sometimes even necessary — to take 'me time.' To best take care of our patients, we need to first take care of ourselves."



THE EXPERIENCE

Torrence Wilson, M.D. (U '87), a retired Mayo Clinic consultant in the Department of Urology, also participated in the program. A West Point graduate and U.S. Army Ranger who holds the Silver Star and two Purple Hearts, Dr. Wilson says he's always adhered to a healthy lifestyle and works out five or six times each week. He enrolled in the Healthy Living Program for Physicians to find ways to improve his nutrition and exercise practices.

As a result, he's modified his workouts and diet. "I was already physically fit but am very pleased with what I gained," he says. "I hadn't been doing any balance techniques. I learned that I could improve my balance and strength with specific techniques and training. I added more nuts in my diet and reduced my red meat consumption."

Dr. Wilson appreciated the one-on-one evaluations and training, small-group environment and physician focus. "We speak a common professional

language, and the size of the group was intimate and comfortable," he says. "I am retired from practice so I don't have patients to share the learning with, but I plan to share it with my family and friends."

Like Dr. Wilson, Dr. Fox has built balance training into her routine. She's also added more NEAT into her life — taking the stairs, parking farther away from her destinations — and is preparing snacking vegetables in bulk. "My husband is a surgeon and often doesn't take time for lunch," she says. "When he comes home, he'll eat whatever is within reach. Now, I have veggies and hummus ready at a moment's notice. This has led to better eating for all of us and sets a good example for my children.

"I look at the Healthy Living Program for Physicians as a gift I gave myself — and my husband, children, colleagues and patients. After 15 years of practice, it's a great refresher course to recharge myself and be better grounded, more present, more capable and less stressed." ▲

Healthy Living Program for Physicians — the elements

The Mayo Clinic Healthy Living Program for Physicians takes place in the state-of-the-art Dan Abraham Healthy Living Center at Mayo Clinic in Rochester. Participants:

- Learn how lifestyle medicine can prevent and treat chronic disease and improve quality of life.
- Participate in active hands-on learning in three main areas — diet/nutrition, physical activity and resiliency.
- Have personal physical activity assessments — biometric evaluation, body composition scan, cardiovascular and resistance plan, cardiovascular stress test, strength and movement assessments.
- Have one-on-one sessions with physicians, physical therapists, exercise specialists, resiliency specialists, certified wellness coaches and dietitians.
- Create an individualized wellness plan.
- Develop skills to help patients design wellness plans.
- Earn 22 CME credits and ABIM MOC points.

healthyliving.mayoclinic.org/physiciancme.php
507-293-2933



WHERE ARE THEY NOW?

*Kofi Derek Owusu
Boahene, M.D.*



When Kofi Derek Owusu Boahene, M.D. (ENT '04), turned 8 years old, his father bought him a set of encyclopedias for his birthday. As the youngster studied the books, he noticed a listing for Mayo Clinic. Growing up in Ghana, West Africa, he didn't know where Rochester, Minnesota, was. But he liked what he read. And he told everyone he'd work there someday.

I had no idea how far away it was from my circumstances," says Dr. Boahene, the oldest of eight children. "I soon forgot about this notion."

After a government coup two years later, his family plummeted from prosperity to poverty, which continued until Dr. Boahene was 16. He attended boarding school in Kumasi, the second-largest city in Ghana. When a classmate was seriously injured in a motorbike accident, Dr. Boahene decided to pursue a career in medicine.

"We took him to a hospital, but there were no doctors to help him," he says. "My friend survived, but he couldn't continue with school as his face was so disfigured. I wanted to change things. Health care was a privilege of the wealthy in Ghana who often travel to Europe or the U.S.A. to obtain special care. People died from diseases that were easily treatable elsewhere."

TO RUSSIA

Dr. Boahene got a chance to study medicine in Russia, then the U.S.S.R. "When you're from an impoverished country, you take any opportunity for education," he says. "My opportunity in Russia turned out to be veterinary medicine — not what I wanted but an opportunity nonetheless."

Early in Dr. Boahene's studies, the U.S.S.R. experienced economic collapse and civil unrest, leading to its dissolution. During his third year in Russia Dr. Boahene visited the U.S. for the first time to see family friends in Arkansas. A friend warned him not to return to the U.S.S.R. because of worsening conditions and fears for the safety

of foreign students. All of his belongings were left behind. He decided to continue his education in the U.S. and enrolled at the University of Central Arkansas in Conway. He completed his undergraduate degree in two years.

TO ARKANSAS

"When I registered for my first semester courses, I was told that the tuition was the same whether one took 12 or more than 12 credits," says Dr. Boahene. "I thought that was the best deal ever. I took 24 credits so I could get done faster and cheaper. I also worked as a Russian tutor since I'd learned the language during my time in Moscow. At night I worked in a furniture factory and saved money for medical school."

His efforts to get into medical school were thwarted. He was accepted, but the offer was withdrawn at the last minute. "It's not easy for foreign students to get into medical school in the U.S.," he says. "I thought I had to give up medicine."



Kofi Boahene, M.D. (right), with his father, James, and sister, Elaine, during childhood in Ghana.



“I walked through the campus and saw places and names I’d read about in the encyclopedia when I was 8. I was awestruck.” – Kofi Derek Owusu Boahene, M.D.

In the meantime, he pursued a master’s degree in electrophysiology in Arkansas. When he was finally accepted to a medical school, he was exhilarated but had used all of his savings on graduate school.

“I thought it was over,” he says. As luck would have it, Dr. Boahene encountered his undergraduate chemistry professor who was out for a jog.

“He asked how I was doing and what my plans were for the fall,” says Dr. Boahene. “I told him I wasn’t sure because I didn’t have the money for medical school. He asked if I’d explored student loans. I had, but I needed an American to cosign. He told me to get the application forms and meet him on campus. We met, and he said he needed to talk to his wife. My hopes were dashed until he called me to his office to tell me he and his wife had decided to cosign. He said, ‘Don’t disappoint us.’”

TO NASHVILLE

Dr. Boahene kept his co-signers apprised of his progress during medical school at Meharry Medical College in Nashville, Tennessee, and then residency at Mayo Clinic.

How did the man who’d dreamed of Mayo Clinic as a child in Ghana find his way to Mayo Clinic? During medical school, he received a letter from Mayo inviting him for a summer clinical observation. He initially turned it down.

“I didn’t connect the Mayo Clinic in the letter with the Mayo I’d read about in the encyclopedia, and the opportunity coincided with my Step 1 medical exams for licensing,” he says. “Two weeks later it dawned on me that it was that Mayo Clinic, and I called frantically to see if the opportunity was still available.”

TO ROCHESTER

It was, and Dr. Boahene went to Mayo Clinic for a Visiting Medical Student Clerkship.

“It was my introduction to a place where everything was patient focused,” he says. “I wanted to be part of it. I walked through the campus and saw places and names I’d read about in the encyclopedia when I was 8. I was awestruck.”

He matched at Mayo for residency in otolaryngology head and neck surgery.

“The surgical training at Mayo Clinic is modeled on the historical apprenticeship approach,” he says. “In most residencies today you work with different surgeons over time and get increasing responsibility. At Mayo, you apprentice with a consultant for a few months, then move to another. You get one-on-one attention from the beginning.”

During residency, Dr. Boahene’s chemistry professor/student loan co-signer contacted him to see if he could repay the loan. “He and his wife had found their dream home but couldn’t get a loan because they’d cosigned for me,” he says. “I couldn’t pay it back yet. I called the bank, explained the situation and promised I would pay it back as soon as I could after residency. The bank gave them the loan.”

TO BALTIMORE

After residency, Dr. Boahene completed a fellowship in facial plastic and reconstructive surgery at the University of Minnesota. He joined the staff of Johns Hopkins University School of Medicine in Baltimore, Maryland, in 2005. His clinical expertise is in facial paralysis, minimally invasive anterior skull base

surgery, ethnic plastic surgery, and reconstruction after treatment of head and neck cancer. His research focuses on minimal-access approaches to skull base lesions and facial reanimation.

"I have encouraged some students I have mentored at Johns Hopkins to seek residency training at Mayo," he says. "I learned through the preserved apprentice training, and my skill set improved quickly. I continue to believe that Mayo is one of the best places to train as a surgeon."

In 2015, the cosigning professor, Jerry Manion, Ph.D., died. Dr. Boahene delivered a eulogy at his funeral. "His wife told me that he never stopped talking about me and told students in his classes how I was doing," he says. "He was confident in his investment in me. I try to pass on that generosity to others."

BACK TO GHANA

For years Dr. Boahene has done medical mission work in countries including Peru, Mexico, Liberia, Nigeria, Rwanda, Bangladesh and Ghana. Now he wants to make more substantial, sustainable change.

He has plans to build a hospital in Ghana. He recently signed contracts to buy land and is fundraising to build the hospital structure.

"I want to help transfer surgical expertise to Africa," he says. "Often native Africans train in the U.S. and don't go back. I am part of the so-called African brain drain. Yet a growing group of African doctors who now work outside their native countries go back periodically to teach, train and treat. I formed a nonprofit foundation that has recruited volunteer physicians to do surgeries in Ghana and other African countries. I could keep going and doing surgeries, but the problem will remain. I want to build local surgical capacity in Ghana instead. In my opinion, the best way to make an impact is to train people in the country to do it themselves. The hospital I'm building will provide the infrastructure for training West African surgeons locally. Colleagues I trained with at Mayo are committed to helping me achieve this vision. My two brothers who are physicians are involved as well.

"My parents raised us to give back. I feel fulfilled when I extend myself to help others." ▲



Kofi Boahene, M.D., wrote a book about his life, *However Far the Stream Flows: The Making of the Man Who Rebuilds Faces*.

Kofi Derek Owusu Boahene, M.D.

Associate Professor, Otolaryngology Head and Neck Surgery,
Johns Hopkins University School of Medicine
Baltimore, Maryland

- **Fellowship:** Facial Plastic and Reconstructive Surgery, University of Minnesota, Minneapolis
- **Residency:** Otolaryngology Head and Neck Surgery, Mayo Clinic School of Graduate Medical Education
- **Medical School:** Meharry Medical College, Nashville, Tennessee
- **Undergraduate:** University of Central Arkansas, Conway, Arkansas
- **Native of:** Accra, Ghana, West Africa

FAST 5

DR. BOAHENE

1 | How did veterinary medicine compare to human medicine?

Dr. Boahene: In my opinion, veterinary medicine is more challenging than human medicine because it deals with multiple species. Veterinary medicine gave me a good foundation in anatomy, which carried over to human medicine. Most of the diseases in humans and animals are similar. Studying veterinary medicine in Russian added its own challenges. I had to learn to speak and write the Russian language very quickly besides studying the language and science of medicine.

2 | How did you choose your specialty?

It's a funny story. I was initially interested in orthopedic surgery. I was assigned my first surgery rotation at Fort Campbell hospital in Kentucky — an Army facility. I thought I had been granted my request for orthopedic surgery. The surgery coordinator wrote otolaryngology on my form instead of orthopedic surgery, and it was impossible to get it changed at the military hospital. During my rotation, two Army helicopters crashed in a routine training exercise, and the victims were brought to the hospital. As part of the mass casualties, we had to treat extensive extremity fractures. I retracted so many limbs and realized orthopedic surgery wasn't for me. On the contrary, my exposure to otolaryngology was captivating even though it had happened by mistake.

I like the anatomy of the head and neck region — it's very complex. I also like rebuilding faces. Your face is who you are. You can cover an injury on your leg but not on your face.

3 | How do you maintain a relationship with Mayo Clinic?

Mayo has a special place in my heart. Going there was my childhood dream — an improbable dream that came true. It's always been my home.

My wife, Adjoa, did a rotation in dental specialties at Mayo Clinic, and it is where we first met. My oldest child, Akua, was born at Rochester Methodist Hospital.

My brother, Francis Owusu, is an ICU nurse at Mayo Clinic. Two of my younger brothers, James Owusu, M.D. (otolaryngologist at Mid-Atlantic Permanente Medical Group, McLean, Virginia), and Kofi Owusu, M.D. (anesthesiology resident, Penn State Hershey Medical Center), did clinical rotations at Mayo Clinic when they were medical students at Wake Forest School of Medicine.

I keep in touch with my Division of Gastroenterology and Hepatology mentors, particularly Kerry Olsen, M.D. (MED '76, ENT '81), Eric Moore, M.D. (ENT '97), Colin Driscoll, M.D. (ENT '97), and Charles Beatty, M.D. (ENT '82) (all in the Department of Otolaryngology – Head and Neck Surgery). Lewis Roberts, M.B., Ch.B., Ph.D. (I '95, GI '98), and I went to the same high school in Ghana, and we share the passion of giving back to Ghana.

4 | How does Mayo influence your practice?

Health care delivery in the U.S.A. has changed a lot. The added mandates of electronic health records and documentation have changed physician practice significantly — often requiring more time than patient care. However, Mayo is a very patient-centered place. Everything else is secondary. That has stayed with me.

5 | What motivated you to continue despite so many obstacles to becoming a physician?

I only had to look to where I started from to know where I wanted to get. There was no giving up. If you know where you are trying to get to, it makes getting there much easier in spite of obstacles.

Also, I had help from many others — many Americans. I call them my Samaritans.

Moreover, obstacles are there to be overcome. They make you stronger and your life richer. I was focused on becoming a physician as a way to help others. When my parents had nothing, they gave of themselves selflessly. Medicine was my way to do the same.



MAYO CLINIC ALUMNI ASSOCIATION 70th BIENNIAL MEETING

The future of medical education
and cutting-edge innovation



Oct. 5–7 • Ponte Vedra Inn & Club,
Ponte Vedra Beach, Florida

THURSDAY, OCT. 5

6–8 p.m. Welcome reception, Ponte Vedra Inn & Club

FRIDAY, OCT. 6

8 a.m.–4:45 p.m. Scientific program

Alumni Association update

Susheela Bala, M.D. (PAIM '87), President, Mayo Clinic Alumni Association; Adult and Pediatric Allergy, Asthma and Immunology, San Bernardino, California; Chief of Allergy, J.L. Pettis VA Medical Center, Loma Linda, California

Welcome and Mayo Clinic Florida update

Gianrico Farrugia, M.D. (I '91, GI '94), Vice President, Mayo Clinic; CEO, Mayo Clinic in Florida

Raymond Pruitt Lecture

Fredric Meyer, M.D. (NS '87), Juanita Kious Waugh Executive Dean for Education, Mayo Clinic College of Medicine and Science; Dean, Mayo Clinic School of Medicine; Enterprise Chair, Department of Neurologic Surgery, Mayo Clinic; Alfred Uihlein Family Professor of Neurologic Surgery

Doctors Mayo Society Lifetime Achievement Award Lecture

Amy Williams, M.D. (I '87, NEPH '90), Chair, Department of Medicine, Division of Nephrology and Hypertension, Mayo Clinic in Rochester; Professor of Medicine

Judd-Plummer Lecture

Alfredo Quinones-Hinojosa, M.D. (NS '16), Chair, Department of Neurologic Surgery, Mayo Clinic in Florida; William J. and Charles H. Mayo Professor

Individualized Medicine: A View at the Crossroads of Promise and Reality in the Practice

Alexander Parker, Ph.D. (HSR '00), Cecilia and Dan Carmichael Family Associate Director for the Center for Individualized Medicine; Vice Chair, Department of Health Sciences Research, Mayo Clinic in Florida; Professor of Epidemiology and Urology

Stem Cell Research

Abba Zubair, M.D., Ph.D. (LABM '03), Department of Laboratory Medicine & Pathology; Associate Dean, Mayo Clinic School of Health Sciences, Florida; Associate Professor of Laboratory Medicine and Pathology

There is No Excuse to Learn on the Patient: An Introduction to Medical Simulation

Leslie Simon, D.O. (EM '13), Medical Director, J. Wayne and Delores Barr Weaver Simulation Center; Department of Emergency Medicine, Mayo Clinic in Florida; Assistant Professor of Emergency Medicine

A Time for Biodiscovery: The New Mayo Discovery Center

Mark McNiven, Ph.D. (GI '89), Director, Mayo Clinic Center for Biomedical Discovery; Division of Gastroenterology and Hepatology, Mayo Clinic in Rochester; George M. Eisenberg Professor

The Goals of Care Discussion: Palliative Care Tools for Any Specialty

Alva Roche Green, M.D. (FM-PM '11), Department of Family Medicine, Mayo Clinic in Florida; Instructor in Family Medicine and Palliative Medicine and Pediatrics

Case Studies in Palliative Medicine

Maisha Robinson, M.D. (I-1 '08, N '11, NHOSP '13), Department of Neurology, Mayo Clinic in Florida; Assistant Professor of Neurology



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Health Care Reform — Change is Inevitable; Progress is Optional

William Stone, M.D. (S '88), Division of Vascular and Endovascular Surgery, Mayo Clinic in Arizona; Professor of Surgery

Physician Burnout: Prevalence, Drivers, Consequences and Mitigating Strategies

Liselotte (Lotte) Dyrbye, M.D. (CIM '01), Division of Primary Care Internal Medicine, Mayo Clinic in Rochester; Professor of Medical Education and Medicine

Communications in Healthcare

Galen Perdakis, M.D. (PLS '01), Chair, Division of Plastic and Reconstructive Surgery, Mayo Clinic in Florida; Professor of Plastic Surgery

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FRIDAY, OCT. 6

6-10 p.m. President's Gala, dinner and program

Presentation of Humanitarian and Professional Achievement awards; installation of incoming Alumni Association president *Eric Edell, M.D.* (THD '88)

SATURDAY, OCT. 7

8 a.m.-noon

- Priestley Society scientific sessions
- J. Wayne and Delores Barr Weaver Simulation Center, rotating simulation scenarios

SCIENTIFIC PROGRAM CHAIR

Galen Perdakis, M.D.

GENERAL CHAIR

Gianrico Farrugia, M.D.



IF IT'S BROKE, FIX IT



2017 Mayo Clinic Alumni Association Donald C. Balfour Award for Meritorious Research

Johnathon Aho, M.D., Ph.D. (CI '16, BME '17, S '18), an up-and-comer in device and tissue engineering at Mayo Clinic, likes to tinker. As a youngster he bought toys, small race cars and old computers at garage sales and fixed them. "I'm frugal by nature and have always liked to fix things and make them work," he says.

He continued that pattern as an undergraduate, doing research in the Visible Heart Laboratory at the University of Minnesota. "I could see myself going into fixing anatomy — cutting, sewing and putting things back together to fix disease," he says. "A career in cardiothoracic surgery would allow me to correct the tubes in the thoracic cavity to help people breathe or swallow better. It's an extension of who I am and what I've always like to do."

'WE CAN DO BETTER'

Dr. Aho so enjoys cutting and sewing that he volunteers most Fridays to mentor general surgery interns in basic surgical skills in Mayo's cadaver and animal research labs. He even reorganized the large animal training lab experience, improving the curriculum and procedural pathway. Why? He's never satisfied with the status quo. Whether it's a training experience, a process or a tool, he says, "We can do better — for patients, for practitioners. It bothers me when things aren't better today.

"But change involves risk. To make meaningful advances, you have to take small calculated risks. Clinical training teaches you to practice safely, not necessarily innovate. With one foot firmly planted in research, I want to innovate. People tend to focus on the big innovations to improve patient care. Small innovations may not produce glory, but they play a huge role. I'm driven by the chance to make things better."

AFTER REJECTION, 'GET BACK ON THE HORSE'

Dr. Aho says his efforts to innovate have led to a stack of rejection letters that's waist-high. "Grants, awards, patents, schools — it's a competitive world. I take risks and put my best foot forward. Ninety-eight percent of the stuff you attempt results in failure. After a risk, a rejection or a failure, I get back on the horse. More often than not people are afraid to put themselves out there."

One risk Dr. Aho took was in his uncommon training path. After completing two years of general surgery residency, he paused to pursue a Ph.D. degree. He resumes his residency in July 2017 and has plans to complete a fellowship in cardiothoracic surgery.

"I wanted to learn a different skill set to enable me to solve patients' clinical problems," he says. "I've reaped significant dividends from the decision to interrupt my clinical training. I've developed novel

surgical devices and clinical trial protocols based on tissue engineering and stem cell therapies.”

REWARD FROM RISK

The risk Dr. Aho took in pausing his residency resulted in his selection for the Balfour Award, joining a long list of Mayo-trained luminaries. Those who nominated Dr. Aho for the Balfour Award describe him as deeply and remarkably curious, industrious, hugely innovative and enthusiastic, prolific in research and passionate about developing therapeutic approaches that improve patient care.

His research centers on biomedical engineering and surgery, including thoracic reconstruction through tissue-engineering approaches, thoracic instrumentation, imaging and devices. “The goal of my work is to unify those fields to generate novel tissue-engineered constructs to replace or regenerate thoracic hollow tubular structures, such as the esophagus and tracheal-bronchial tree,” he says.

Dr. Aho has developed approaches for applying tissue-engineered implants for esophageal replacement in patients diagnosed with malignant disease or congenital esophageal defects. He’s also developed and tested tissue-engineering grafts of esophageal resection in large animal models. Dr. Aho moved from scientific concept to preclinical testing and is leading efforts to finalize Investigational New Drug applications through the Food and Drug Administration (FDA) for esophageal tissue-engineered conduits. He has assisted in efforts to gain FDA approval for compassionate care use of adipose-derived mesenchymal stem cell tissue-engineered grafts for treatment of bronchopleural fistula — an application that’s currently undergoing expansion into full clinical trials for other indications for this therapy.

Dr. Aho has 20 patents for methods and devices, almost 60 peer-reviewed manuscripts and several grants.

‘I’D DO IT FOR FREE’

Daniel Tschumperlin, Ph.D. (PHYS ’13), vice chair of Mayo’s Department of Physiology and Biomedical Engineering, says Dr. Aho’s work will make important contributions to the fields of tissue engineering and esophageal repair. “Johnathon has innate curiosity, an innovative spirit and the



Johnathon Aho, M.D., Ph.D.

Resident, Department of Surgery
Mayo Clinic in Rochester

- **Residency:** General Surgery, Mayo Clinic School of Graduate Medical Education
- **Graduate:** Ph.D., Biomedical Engineering and Physiology, Mayo Clinic Graduate School of Biomedical Sciences
- **Medical school:** Chicago Medical School, Chicago, Illinois
- **Undergraduate:** Michigan Technological University, Houghton, Michigan
- **Native of:** Rochester, Minnesota

resiliency to persevere despite the failures inherent in research. He’s always looking for ways to do things better. Taking time away from clinical training to do a Ph.D. gives him much greater appreciation for the broader resources he can call upon to engineer solutions to problems he identifies.

“His research has sparked deeper questions about the cellular mechanisms of esophageal repair and serves as a platform on which he and the field can build in the long term as tissue engineering and regenerative medicine mature toward their full translational potential.”

Long term, Dr. Aho sees himself with a surgical and clinical practice that includes research time to work on devices and translational medicine. “If I had infinite money in the bank, I’d still do this — I’d do it for free,” he says. “I love what I do.” ▲



CHALLENGE TO THE DIABETES STATUS QUO



2017 Mayo Clinic Alumni Association Edward C. Kendall Award for Meritorious Research

Rene Rodriguez Gutierrez, M.D. (ENDO '16), came to Mayo Clinic through his own initiative, according to his mentor, Victor Montori, M.D. (I '99, CMR '00, CLRS '01, ENDO '02), Division of Endocrinology, Diabetes, Metabolism, & Nutrition and director of Mayo's Knowledge and Evaluation Research (KER) Unit. "He sent me a note, offered his talent and asked for the opportunity to work with us," says Dr. Montori. "Usually, people come recommended by others — internal or external senior people. I recognized his hunger — not to make a name for himself but, rather, to make a contribution for patients."

Dr. Rodriguez Gutierrez says he thought Mayo was the best place to work in evidence-based medicine. He secured a fellowship in the KER Unit, which focuses on translating the best available research evidence into clinical practice through evidence synthesis and enhancements in the patient-clinician encounter. Newly married, Dr. Rodriguez Gutierrez left behind his wife, who was in the third year of her dermatology residency in Mexico.

ENTHUSIASM DESPITE HIGH RISK

In Rochester, Dr. Montori offered Dr. Rodriguez Gutierrez a controversial project — one that could challenge the whole field of diabetes.

"Rene didn't flinch even when I told him it could be a career-ender," says Dr. Montori. "He was enthusiastic despite the high risk. He knew that if our suspicions about diabetes treatment were verified, patients and clinicians could benefit greatly, but it would upend the diabetes community. He was willing to take the risk, and we supported him."

The risk was addressing current diabetes treatment guidelines. Drs. Montori, Rodriguez Gutierrez and others had suspected that clinical guidelines for treating type 2 diabetes were at odds with the accumulated evidence. The widely accepted hypothesis has been that the lower the blood sugars, the better the outcomes. But achieving the stringent A1C (glycated hemoglobin) goal of 7 percent or less requires multiple medications, clinic visits and lab tests. And Drs. Montori and Rodriguez Gutierrez doubted that regimen produced the health outcomes that matter most to patients — reduced complications and mortality.

Dr. Rodriguez Gutierrez's comprehensive evaluation of the evidence revealed very little difference in those measures between tightly controlled type 2 diabetes (A1C of 7 percent or less) and conventionally controlled type 2 diabetes (A1C between 7 and 8 percent) in terms of microvascular outcomes, neuropathy, renal failure, stroke,

amputations, and cardiovascular or other mortality. And hypoglycemia is a risk associated with tight control. The work was published in *Circulation: Cardiovascular and Quality Outcomes*, which named his paper the third-most important by impact published by the journal in 2016.

CONTROVERSIAL CHALLENGE TO THE STATUS QUO

Reaction to the research has been enthusiastic by some and skeptical by many others. According to Dr. Montori, a common comment is that there's something wrong with the results because "we don't agree with them." One physician commented on social media that the results are hard to acknowledge because "most of our diabetes treatment is based on the notion that we must tightly control blood sugars, and then patients will be better off."

Dr. Montori explains: "The worldwide medical community has made that promise to diabetes patients and made them implement complicated treatment. But we haven't helped patients avoid complications or mortality by pushing them toward lower blood sugars. Many want our research to go away so they can maintain the status quo.

"In reality, it could be that we've been focusing our treatments on the wrong target. That we have plenty of evidence on tens of thousands of patients



Rene Rodriguez Gutierrez, M.D.

Professor of medicine

Research director

Division of Endocrinology

Universidad Autónoma de Nuevo León

Monterrey, Mexico

- **Fellowships:** Clinical Endocrinology, University Hospital, Universidad Autónoma de Nuevo León; Research, Knowledge and Evaluation Research Unit, Division of Endocrinology, Diabetes, Metabolism, & Nutrition, Mayo Clinic School of Graduate Medical Education, Rochester, Minnesota
- **Graduate:** Master of Science in Clinical Research, Drexel Graduate School of Biomedical Sciences and Professional Studies, College of Medicine, Drexel University, Philadelphia, Pennsylvania
- **Medical school:** College of Medicine, Universidad Autónoma de Nuevo León
- **Undergraduate:** Universidad Autónoma de Nuevo León
- **Native of:** Monterrey, Mexico

that does not clearly support what we've been doing for decades is problematic. Maybe controlling blood sugars with currently available medications isn't what we should be doing, but our singular focus on blood sugars is limiting our vision."

Dr. Rodriguez Gutierrez concurs: "We based treatment guidelines on an interpretation of the evidence that we can't substantiate and, now, new research is needed." Possible next steps include a closer study of basic science of diabetes to determine if there are worthwhile targets other than blood sugars.

Dr. Montori commends Dr. Rodriguez Gutierrez for his willingness to lay it all on the line. "Rene proceeded with integrity and let the data lead him even when it was risky," he says. "This wasn't a marginal discovery. The results are counter to expert statements and are now in front of everyone who takes care of patients with diabetes. We hope clinicians will recognize the need for a more patient-centered approach to diabetes management in which they find with their patients what's best for each of them. And we hope clinicians will pay more attention to the harms we cause in trying to reduce blood sugars, including hypoglycemia, particularly as the benefits of tight control in patients with type 2 diabetes remain uncertain. We hope our work will spur research on non-sugar-related targets and ultimately lead to better patient care."

REWARDS FROM RISKS

In the last year Dr. Rodriguez Gutierrez has established a unit at Universidad Autónoma de Nuevo León in Monterrey, Mexico, similar to the KER Unit. He is now training others, extending what he learned at Mayo Clinic. He continues to collaborate on diabetes research with Mayo Clinic.

"Medicine in Mexico is much more hierarchical than in the U.S.," says Dr. Rodriguez Gutierrez. "At Mayo I learned the great value in working as a team. I learned to be open and generous in my work. People can really talk to each other and express ideas; fellows can easily communicate with mentors. It's a safe place to work, and it helped me develop, gain confidence and find myself."

Dr. Rodriguez Gutierrez says the day he received the Kendall Award was one of the most important days of his academic life. "It has a lot of significance for me, my family, my university and the people who supported me. I was alone at Mayo for a year, while my wife was in residency. It was a sacrifice and a risk for us but worth what I gained."

Dr. Rodriguez Gutierrez gained recognition for his research and completed 31 peer-reviewed publications in top journals while at Mayo. He gained something else, too. Dr. Montori helped arrange for Dr. Rodriguez Gutierrez's wife, Gloria Gonzalez, M.D., to complete a monthlong observership in the Department of Dermatology during her husband's year at Mayo. The couple had their first child, Rene, in May 2016.

"I'm thankful to have had the opportunity to train at Mayo and have Dr. Montori as a mentor," says Dr. Rodriguez Gutierrez. "I hope our important research will result in abandonment of the mechanical approach to diabetes patient care in which all patients go in the same 'box.' It's important to remember that each patient has their own story and context. The care we provide needs to take that into consideration so we provide the kind of care patients really need." ▲

“At Mayo I learned the great value in working as a team. I learned to be open and generous in my work.” – Rene Rodriguez Gutierrez, M.D.

MAYO CLINIC UPDATE



Mayo Clinic named to the *Fortune* '100 Best Companies to Work For' list

Fortune named Mayo Clinic to its 2017 "100 Best Companies to Work For" list, ranking it No. 84. Mayo Clinic was No. 86 in 2016. This is Mayo's 14th consecutive year on the list, which recognizes companies that rate highly with staff.

Mayo also was ranked No. 22 by *Fortune* in its list of the top 30 "Best Workplaces in Health Care."

Celebrating 40 years

This year marks the 40th anniversary of the Doctors Mayo Society. "Thank you to our Doctors Mayo Society members for your philanthropic leadership and for inspiring others to give," says Eddie Greene, M.D. (NEPH '00), chair, Doctors Mayo Society. "You ensure that Mayo Clinic continues to lead the world in advancing medical science and medical education and transforming health care for everyone."

To make a gift or become a member:

- Department of Development, 800-297-1185
- doctorsmayosociety@mayo.edu



Online stories

Did you know we offer additional feature stories on the Alumni Association website? Check out stories like these:

1. "Mayo's 3-D Anatomic Modeling Lab — Hold It!"
In 2016 the lab produced 500 3-D models representing almost every anatomic body part. Learn how 3-D printing is changing the surgical landscape.
2. "Advanced Product Incubator — Mayo enters medical-grade product manufacturing space,"
a new facility for producing medical-grade products for regenerative medicine applications.
3. "CT Clinical Innovation Center: four decades of CT innovation at Mayo Clinic" including a novel CT scanner with a photon-counting detector. Mayo is the first medical center in the world to image patients with this scanner.

<https://alumniassociation.mayo.edu/news/>



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Obituaries

LeRoy Byrd, M.D. (I '70),
died Dec. 22, 2016.

David Ferguson, D.D.S. (OMS '70),
died March 25, 2017.

John Flanagan, M.D. (I '59),
died Jan. 6, 2017.

Neal Kirkpatrick, M.D. (I '49), died Feb. 12, 2017.
For more information about Dr. Kirkpatrick, visit
<https://alumniassociation.mayo.edu/obituaries/neal-r-kirkpatrick-m-d-1949/>.

Conrad Larson, M.D. (I '74),
died March 31, 2017.

Lawrence Lougheed, M.D. (NS '57),
died Feb. 7, 2017.

George Osland, M.D. (S '73, OR '77),
died March 20, 2017.

Robert Rudesill, M.D. (I '55),
died Nov. 7, 2016.

Heinz-Joachim Sykosch, M.D. (S '57),
died March 5, 2017.

William Weber, M.D. (I '67, P '69),
died Nov. 7, 2016.

alumniassociation.mayo.edu/people
Complete obituaries and alumni news

Mayo Clinic Alumni magazine is published quarterly and mailed free of charge to physicians, scientists and medical educators who studied and/or trained at Mayo Clinic, and to Mayo consulting staff. The magazine reports on Mayo Clinic alumni, staff and students, and informs readers about newsworthy activities throughout Mayo Clinic.

Please send correspondence and address changes to:

Mayo Clinic Alumni Center
Siebens 5-33, Mayo Clinic
200 First Street S.W.
Rochester, MN 55905
mayoalumni@mayo.edu
507-284-2317
Fax 507-538-7442

Executive Editor

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Contact: Terri Burkel
800-297-1185
507-538-0055
doctorsmayosociety@mayo.edu

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To order, go to <https://alumniassociation.mayo.edu/summer>

