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8 BIG

(and 14 small)

ideas for building

RESILIENCE

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the well-being of a
medical staff PAGE 14

AMIT SOOD: How to be a happy doc PAGE 10

Reframing our view of competition to **PREVENT BURNOUT** PAGE 44

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Minnesota PAGE 51



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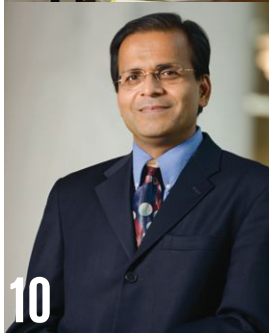
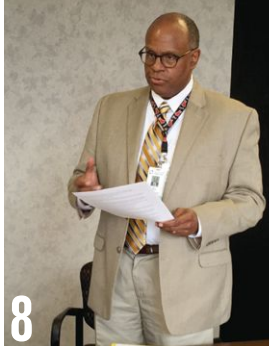
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MINNESOTA MEDICINE

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PHOTO BY SCOTT WALKER

Charles R. Meyer, MD, Editor in Chief

Listen to the voices
of doctors who
have lost it or are
losing it. They all
bemoan the loss
of connection with
patients.

Rekindling the fire

Remember the fire? Remember your passion to “be a doctor?” Remember the intrigue of learning the secrets of the human body and its machinery? Remember the exhilaration of getting responsibility for caring for patients in residency? Remember the excitement of your first job, of being a “real doctor?” It takes fire to get through the gauntlet of medical training, but the real trick is to keep the fire burning throughout a career.

For increasing numbers of physicians, the flame is dwindling. Weekly articles attest to the epidemic of physician burnout. The ranks of doctors abandoning medicine is mounting. And doctors’ lounge grumbling has escalated into a deafening chorus. Physician burnout is a disease in need of treatment.

The etiologies proffered for this disease are a lengthy litany worthy of the longest chapter in Harrison’s *Textbook of Medicine*. Physicians need to see too many patients in too little time. They are asked to chase seemingly meaningless metrics for reasons known only to the “powers that be.” They feel isolated from colleagues and patients. And the universal Satan, the electronic health record, stares impersonally and impassively at thousands of physicians every day telling them “just one more click and you can close this chart and get credit.”

The treatments for burnout are as plentiful as the causes. Doctors need streamlined systems that cut out repetitive steps and make their day more efficient. Get a guru to work on mindfulness. Sign up for a course to learn how to be “resilient.” Be grateful every day and practice random acts of kindness.

None of these solutions is totally wayward, but I fear that the suggested etiologies and treatments don’t home in on the fundamental deficiency in a physician’s day that feeds that fire. Listen to the voices

of doctors who have lost it or are losing it. They all bemoan the loss of connection with patients. Certainly the lack of time is part of this, but there are systemic, institutional forces that have pulled patients and doctors farther apart.

As medical care has become more complicated, the route from patient to doctor has gotten more convoluted if not more circuitous. Patients’ questions and problems are handled by triage nurses, receptionists and medical assistants. The physician increasingly seems like the Wizard of Oz, hiding behind the curtain and pulling the levers. This rising lack of approachability is not good for patients and it’s not good for doctors. For patients, they quickly discover the limitations of paraprofessional personnel. My granddaughter has a complex urological problem and my daughter sometimes feels like she has to navigate the Vikings front four to talk to the doctor. For physicians, handing orders and messages down the chain of communication can be mind-numbing and curiosity-stifling; talking to patients and telling them what you think and helping them wade through their problems is mind-expanding and stimulating.

It’s impractical and undesirable to go back to the “good old days” when doctors did it all. Paraprofessionals are invaluable and do ease a physician’s day. Scribes help some physicians have more eyeball time with patients. But regardless of how your system works, approach those people in the exam room and on the phone who sometimes need only you with a glint in your eye, curiosity in your brain and a genuine interest in the person behind the symptoms. You will find the fire.

Charles Meyer can be reached at charles.073@gmail.com.

For Physicians in Minnesota. . . Hearing Loss, Dementia And Your Patients

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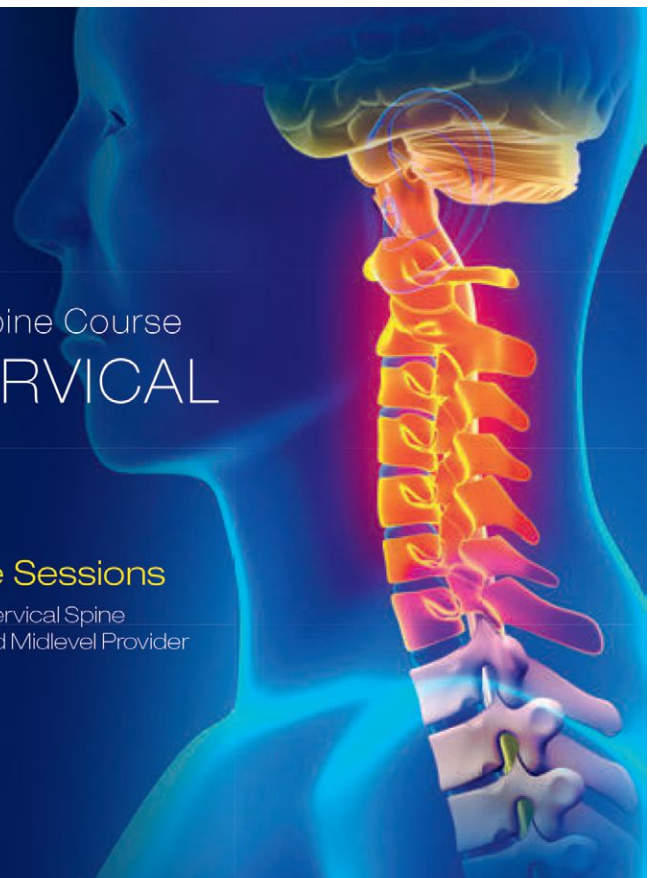
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Dietary guidelines and meat

I was very pleased to see that the September/October issue of *Minnesota Medicine* featured articles on food. Good nutrition is essential for health.

However, I was surprised that the article by DiNicolantonio, Harcombe and O’Keefe recommended eating more meat. By contrast, the authors of the Scientific Report of the 2015 Dietary Guidelines Advisory

Committee state that “higher intake of red and processed meats was identified as detrimental compared to lower intake.”

The report also states:

“The overall body of evidence examined by the 2015 DGAC [Dietary Guideline Advisory Committee] identifies that a healthy dietary pattern is higher in vegetables, fruits, whole grains, low- or non-fat dairy, seafood, legumes and nuts; moderate in alcohol (among adults); lower in red and processed meat; and low in sugar-sweetened foods and drinks and refined grains. Vegetables and fruit are the only characteristics of the diet that were consistently identified in every conclusion statement across the health outcomes.”

The report, which is based on multiple systematic reviews of the published literature, is very readable and is a careful analysis about what is currently known about the relationship between particular foods and health. It is essential reading for any clinician who advisers their patients about nutrition.

Thomas E. Kottke, MD, MSPH
Medical Director for Well-Being, HealthPartners
Minneapolis

Response: I think Dr. Kottke is misinterpreting what our article states. We never once recommended “eating more red meat” because we never address what an ideal quantity of red meat intake is (in fact, no one can actually answer that question with 100 percent certainty). We simply recommended: “Eat natural foods, meat, fish, eggs, dairy products, avocados, nuts and seeds, and the natural fats contained therein.” We also do not recommend eating processed meats.

James H. O’Keefe, MD
James J. DiNicolantonio, PharmD

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Jane Oh, MD,
demonstrates
"tree pose."

Finding her namaste

Jane Oh, MD, stands at the front of the warm candle-lit studio and welcomes the 10 women who are seated on yoga mats.

"We'll begin in child's pose," she says, then cues them to rest their hips on their heels, place their forehead lightly on the mat and extend their arms long in front. She then tells them to begin breathing in and out like the ocean's tides—a technique that calms the mind and warms the body.

Tonight, she isn't Dr. Oh, an internal medicine physician with Park Nicollet in Burnsville, she's Jane, an instructor at Core Power Yoga in Apple Valley. Oh has been teaching at the studio on Thursday nights for the past two years—something she admits she's passionate about. "I felt that because of my background taking care of people and their bodies, I would have something special to give to teaching," she says of her reason for becoming a yoga instructor.

A longtime runner, Oh's journey to yoga began about 15 years ago, when her husband, who competes in marathons, brought her to her first class. "It was intense Bikram-style yoga in a 105-degree room with humidity," she says. "I loved it. It was so different from what I had done with running. I liked being able to connect the breath and movement. It was a whole different way to be in my body."

Oh found yoga isn't just about exercise, it's about mindfulness and feeling grounded. "Having a very stressful job and being the mother of two children, I was always running. Going to yoga was a place to unwind—to get away from the day, to give back to myself," she says.

She's also found it has renewed her energy for medical practice. "I'm not exactly sure why, but when I'm sitting in a room with a patient, I can more easily listen with compassion. As a physician, there's a lot of suffering we're witness to, and I can be there without completely absorbing all of it."

Although she knows of other physicians who practice yoga, and even sees some at the studio where she teaches, she knows many still view it with skepticism. Oh is hoping to change that. At the HealthPartners Institute's "Flourishing in Your Work and Life" conference last month, she led a yoga practice geared toward physicians. "Doctors really need to learn how to take care of themselves," she says.

She's also received a grant from the Park Nicollet Foundation to do a six-week mind-body workshop to help internal medicine physicians, family physicians, pediatricians and other primary care providers find ways to be mindful in their daily work. "People don't know what it is," she says of mindfulness, "Unless you have context for it, it's hard to understand. That's why I'm doing this. The more doctors and nurses know about it, the more they will be able to pass it on to their patients."

Oh says she sometimes talks to her own patients about the importance of mindfulness—for example, to take deep breaths when they're in a stressful situation. "I've talked to them about trying to find a practice of meditation. Yoga is a practice of meditation with movement."

In the meantime, she'll continue practicing yoga four to five times a week and teaching. "I love being in the studio," she says. "It's so different from being in the medical clinic, and it's a lot of fun." — KIM KISER

Story teller **IN** residence

Sixteen people are gathered in a conference room on the fifth floor of Hennepin County Medical Center (HCMC) listening intently as Minneapolis writer

Syl Jones recounts what's ailing medicine: Patients complain on satisfaction surveys that no one listens to them. Residents say they have already become sick of mechanistic medicine. There's a gulf between patients and providers.

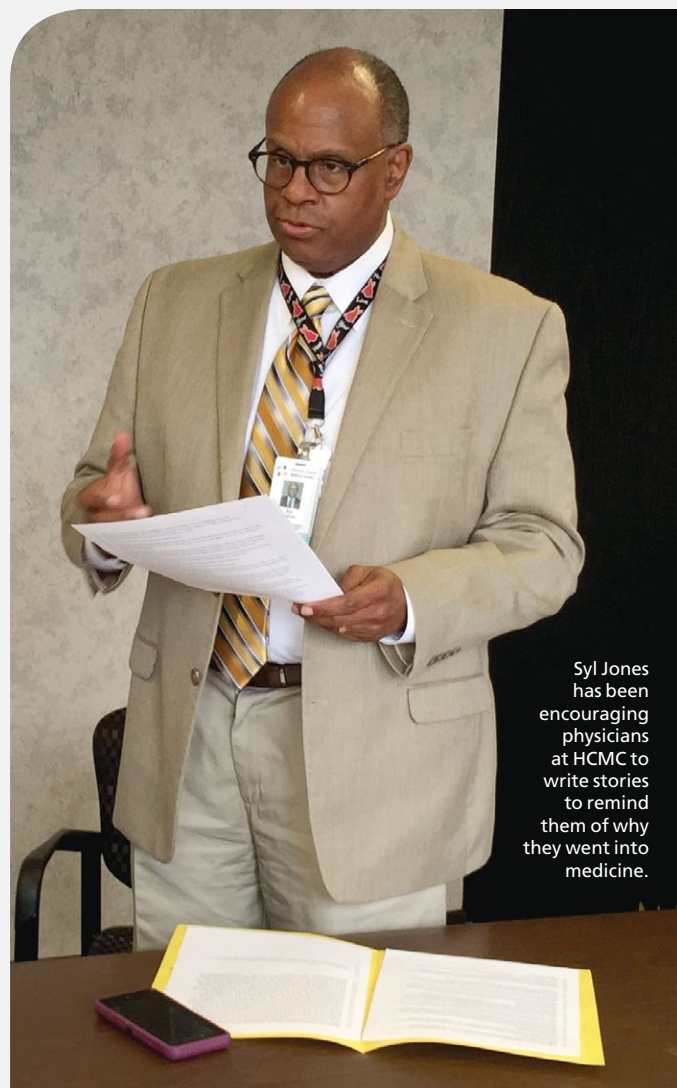
Jones tells them he's there to show them a way to bridge the divide, to rediscover the human side of medicine. By reflecting, reading, listening, writing and imagining, he says, they can begin to open their hearts and experience their patients and themselves in new ways. Then Jones gives the group an assignment: Write about an interaction that made them want to work in health care.

Most hesitate before beginning. One person needs a pen, another paper. All stare at the blank sheet before slowly starting to write. After 10 minutes, Jones asks if anyone is willing to share their story. One man reads about giving the Heimlich maneuver to a 2 year old. A woman tells how she accompanied her grandmother to cancer treatment when she was a child. There are tears and laughter as group members explain how the event affected them. Afterward, someone says, "We never think about things like this." Another notes that "it was nice to have the time to do this."

A veteran storyteller, Jones, who has been a journalist, written more than 60 plays, served as a regular editorialist for the *Star Tribune* and worked as a communications executive for some of the area's largest corporations, is now focused on improving health care. He's on a mission to bring what in certain academic circles is known as "narrative medicine" to physicians and staff at HCMC.

The power of stories

Although he had written about medicine and health care for years, Jones was not familiar with narrative medicine until he heard a story about it on public radio. "I thought, 'What is that?' Then I thought, 'That's what I've been doing, but I didn't have a name for it,'" he recalls.



Syl Jones has been encouraging physicians at HCMC to write stories to remind them of why they went into medicine.

PHOTO COURTESY OF HCMC

Jones did some research and discovered narrative medicine was indeed alive and thriving on the East Coast. New York internist Rita Charon, MD, PhD, had not only coined the term in the 1990s but also established a graduate program in it at Columbia University to help health care professionals learn to understand stories of illness in order to become more sensitive to patients and provide better care. Although Jones isn't a clinician, he thought he might have something to contribute.

He decided to study at Columbia, and in order to do so applied for a Bush Fellowship, which supports individuals making career transitions. However, when the admissions committee at Columbia saw that Jones was a noted playwright and author, they suggested he didn't need to do the full program. So Jones began giving presentations on narrative medicine wherever he could find an audience.

Medical experiment

It was at one of those events that HCMC CEO Jon Pryor, MD, MBA, first heard Jones. "I had no idea who Syl Jones was and what narrative medicine was," Pryor says. But he was struck by

(continued on page 10)



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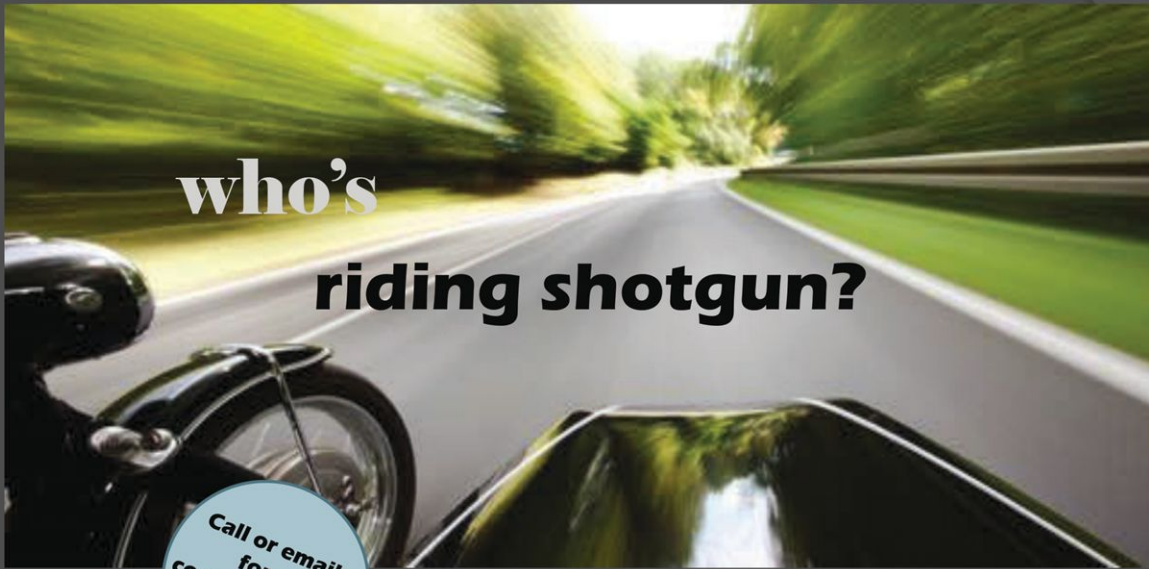
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Story teller in residence

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what Jones was saying: Teaching caregivers to better express themselves and listen would be good for them and for patients. The idea aligned with Pryor's thinking that providing health care was about more than science and technology. "We forget the art part of it," he says.

Pryor also was concerned about the high rate of burnout among physicians. And he knew the staff at HCMC faced daily stressors. He wondered if the techniques Jones was describing might help them. "As I listened," he says, "I came to see there was utility to narrative medicine." He started talking with Jones and last June offered him a new position as a "narrative fellow."

Just what that would entail wasn't well-defined, but Jones set about finding ways to fit in. The challenge, he says, has been convincing those on the front line of health care that taking time to reflect and write is not only interesting, it matters. "They understand that stories are nice. But they may not understand that stories contain the seeds of healing," he says. Over the last 18 months, Jones has worked with more than 400 interns and residents, staff and faculty members at HCMC.

In his application to the Bush Foundation, Jones articulated a very lofty goal: "I told them I was going to put narrative medicine on the map locally and even nationally." Whether he achieves that remains to be seen. But Jones is certainly putting it on the map at HCMC, and Pryor says he's received nothing but positive feedback about Jones's efforts.

"To our knowledge, there's nobody doing what we're doing in the Twin Cities," Jones says. "Health is about the whole person, and taking a narrative approach to medicine is a fresh and revitalizing idea whose time has finally come." — CARMEN PEOTA

THE pursuit OF happiness

Every time he encounters someone, be it a patient, a nurse or the person behind the counter at the coffee shop, Amit Sood, MD, tries to see an individual who is special to someone and who has struggles in life. "There's no judgement, no negative emotions," he explains.

For Sood, viewing people through this lens is an antidote to burnout. "The more people you see, the more uplifted you get. It's the opposite of how we usually work: the more people we see, the more depleted we get," he explains.

That's one of the lessons the Mayo Clinic professor of medicine shares in his workshops on resiliency. Sood imparts his approach, which can be learned in as little as an hour, to more than 50,000 patients, physicians, medical students and other health care professionals each year. The success of his workshops and his two books, *The Mayo Clinic Guide to Stress-Free Living* and *The Mayo Clinic Handbook for Happiness*, both of which have landed on Amazon Top 100 lists, have made him a sought-after speaker at medical conferences, at medical schools and on the TEDx circuit.

Understanding the brain

Perhaps what sets Sood's work apart from much of what can be found in other self-help books and stress-reduction workshops is the fact that his program is grounded in the science of how our brain works.

Along with colleagues at Mayo, he studied MRI scans of the brain, which he describes as a busy place with giant networks of neurons firing, even at rest. Between what he saw and what he learned

from existing research, Sood posited that these networks collaborate to produce two modes—focused and default.

It's in the default mode that the mind starts to wander. And when the mind wanders, we start focusing on our fears, our shortcomings, our need for short-term gratification. "We get stuck there because as we use a certain network, it gets stronger," he says. "And the research shows the more stressed we are, the more time we spend in this mode, and the more we are at risk for depression, anxiety, attention deficit, perhaps even dementia."

Sood says we spend between 50 and 80 percent of our time in default mode. The reason: Our brains evolved for safety and survival, not peace and happiness. "We're playing a rigged game," he says. "Our brains are not designed for our fast-paced world. Our hardware and software are not able to handle the load. And with the workload, lack of control and lack of meaning physicians face, you start to see burnout, you start to see addiction, you start to see violence."

Changing the workplace is one way to prevent those consequences. Another: "to learn to take control of our brain and what we're thinking."

Thinking about thinking

In many ways, Sood epitomizes his philosophy. He projects calm in a clinic infected with busyness. Soft-spoken and unassuming, he listens intently. And he isn't afraid to laugh at himself and the fact that despite years of practice, he is as vulnerable to the dangers of letting his mind wander as any-

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Mayo Clinic's
Amit Sood, MD

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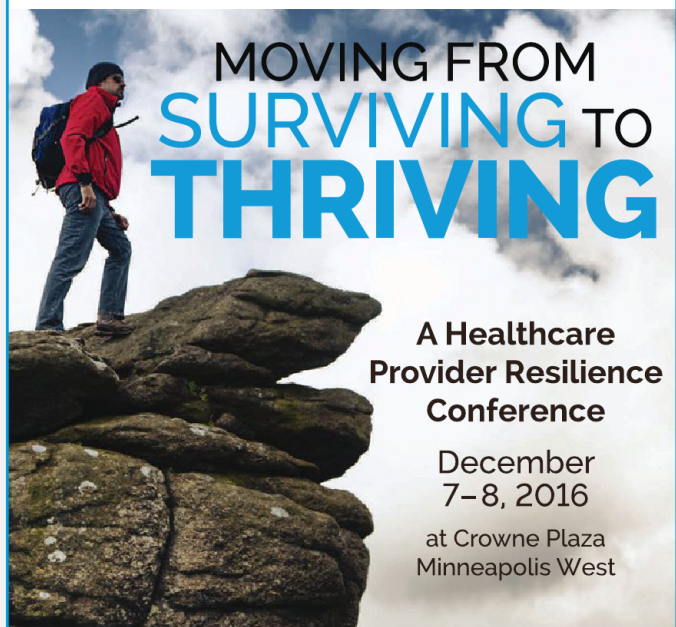
Amit Sood's

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- 2 **When you get home at the end of the day, greet your family as if you haven't seen them in a month.** Find novelty where there is love.
- 3 **Every day, notice one new thing around you** or find a new detail in a familiar object.
- 4 **Try not to judge others.** Align your heart and eyes and silently wish them well.
- 5 **Reframe life's challenges** by focusing on gratitude, compassion, acceptance, meaning and forgiveness.

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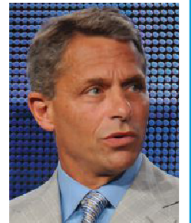
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Sood presenting at the MMA's annual conference in September.

PHOTO BY KATHRYN FORBES



(continued from page 10)

one else. “Since I was 14 or 15, I’ve had multiple heart attacks, strokes, melanoma, lung cancer—all in my head,” he says. “I’ve spent a lot of time dealing with imaginary fears.”

As he tells the story of how his career path took him from wanting to be a cancer specialist to wanting to understand the role the brain plays in resiliency, Sood goes back to 1984 when he was 17 years old. He had just started medical school in Bhopal, India, his family’s home. On December 3, a gas leak at the Union Carbide pesticide plant in the city led to what would become the worst industrial accident in history, exposing more than 600,000 people to a deadly cloud of gas and resulting in at least 3,800 deaths. “We were woken up at 2 a.m. with banging on the door. It was me, my mom and my dad. We had no idea what was happening. We ran for our lives,” he recalls.

The disaster occurred in a very poor, densely populated area. “I saw a lot of stuff that 17 year olds should not be seeing,” he says.

When he came to the United States in 1995 to do a residency at Albert Einstein College of Medicine in New York, Sood was surprised to find nearly as much suffering as he left behind in India. “When I came to the United States, I thought everyone was happy. But I didn’t find that.” He noticed that much of the suffering he saw here was related to people’s inability to make good choices—they lost limbs from peripheral vascular disease, yet continued to smoke; they were obese and unable to control what they ate.

He also began noticing the power of the mind: Why was one patient who had minor physical ailments and an otherwise good life an emotional wreck? Why did another who was expected to live only two months survive two years?

Sood’s curiosity led him to take a six-month “thinking break” from his internal medicine practice in Washington state. During that time, he traveled to India among other places, visiting Gandhi’s ashram, and taking courses in integrative medicine. He also immersed himself in research about the brain and stress that

was coming out of Harvard, Emory, the University of California, San Francisco, University of California, San Diego, and several other centers.

But as he read the studies, he noticed a disconnect between the researchers’ findings and daily life. What was being learned wasn’t being applied. “When it comes to helping people, we’re not incorporating any of it. We’re just picking clichés—telling people to close their eyes, settle in to your breath, be present. That doesn’t help most people.”

When he came to Mayo in 2003 to earn a master’s degree in clinical research along with an integrative medicine fellowship from the University of Arizona, Sood continued to “read and read and read” and spend time with scientists and contemplatives (he even met the Dalai Lama), furthering his awareness of the connection between neuroscience, psychology and spirituality. He decided his challenge would be to find a way to educate people about the brain and reframe their thinking using research-validated principles. And he wanted to make doing so “easier than drinking a glass of water, very appealing and very high-potency.”

Convincing the medical community

Convincing the medical community to accept his ideas about how to make the brain more resilient wasn’t easy. “I remember someone telling me I was wasting my time and I should leave this and do something else,” he recalls. “This was all still very peripheral, bordering on new age.”

But Sood persisted with the idea that if people were more “intentional,” delayed judgement, paid attention to novelty, didn’t focus on threats and imperfections, and cultivated deeper, more productive thinking, they would be happier and less stressed.

He developed the program that is now called “Resilience by Mayo Clinic.” In

2008, he tested it in an eight-week study involving 40 Mayo physicians. “I thought it was very risky to test it on our physicians,” he says, admitting that over the last seven years, he has received his share of negative feedback, which he has used to improve the program. But the results of the physician study showed a statistically significant improvement in measures of resiliency, stress, anxiety and overall quality of life.

Sood, who chairs the Mayo Mind Body Initiative, has since tested his approach among radiology faculty, breast cancer survivors, newly hired nurses and others. He’s seen improvements in the same measures he used with physicians. “We’re now 20 clinical trials into this, and about half a million people have participated in our training,” he says.

Sood’s resiliency program is now mandatory for all Mayo Clinic physicians, incoming nurses and new medical students. His work has also led to further exploration of the effect of happiness on health. He notes that happiness is associated with better cellular health, lower blood pressure, a lower risk of heart attack, longevity and better relationships.

Sood plans to continue to test and refine his program and share what he’s learned with patients and health professionals through books, talks and workshops. He also wants to encourage workplace changes that increase the brain’s ability to lift the load. “There’s insatiable hunger for this,” he says of information about resiliency. “This is not one of those things like Pokémon Go that eventually will fall off the app store.” — KIM KISER



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RESILIENCE

How to tend to
the well-being of a
medical staff

By Carmen Peota



Burnout used to be the problem no one in medicine talked about. Those in the business of healing others were simply expected to accept the tougher aspects of their jobs. Long hours? Stress? Difficult patients? Deaths? Came with the territory.

About 10 years ago, that kind of thinking began to change, as research, much of it done at Mayo Clinic and Hennepin County Medical Center (HCMC), began to show not only the high rates of burnout among medical students, physicians and other health care professionals but also the impact of it. Alarm bells sounded in medical journals, at conferences and in the lay press: Physicians were avoiding certain specialties or leaving practice. Depression and suicide were all too prevalent. Staff were inefficient. Care quality suffered. Something needed to be done.

In the last few years, there's been more than just talk about burnout. Much is being done to prevent it and help those who've hit the point where they no longer find joy in their work. Mark Linzer, MD, director of general internal medicine at HCMC and a national authority on physician well-being, says hospitals, clinics and health care systems are recognizing they have an "organizational imperative" to care for the well-being of their staff. "We're getting calls and notes from all over the country from people who wish to do this," he says, referring to the work HCMC is doing to foster resiliency among staff. "It's a movement whose time has come." ➔

There's been a swirl of activity in our region. Medical educators are teaching trainees how to tend to their own well-being. Health systems are training staff to be resilient and offering support for those who are struggling. More important, many are trying to address problems in the work environment that add to stress. Here we share what some are doing and what they are learning in the process.

1 MAKING ROOM(S)

Linzer says making well-being a priority requires more than giving the issue lip service. "When I speak nationally, what I say is you need an infrastructure," he says. "You need legitimate structure that shows that the organization is committed to what it takes to make this work sustainable."

HCMC has built a visible infrastructure. After it formed a provider wellness committee, it created an Office for Professional Worklife. The office functions as a hub for all activities and initiatives related to medical staff well-being at HCMC. Linzer, its director, and assistant director Sara Poplau conduct research, plan sessions on topics ranging from ergonomics to mindfulness, administer an annual well-being survey, and work with individuals and departments to solve specific problems. "It's a dedicated office space for this activity," Linzer says.

Next, HCMC created the "reset room" for hospital staff. It's a small room with comfortable chairs, dim lighting, a sound machine with settings for soothing ocean waves, and flameless candles for "pushing the reset button during a challenging day," Linzer says. Poplau estimates the room is used up to 10 times a week.

Most recently, HCMC has turned a dining room into a combination hangout, workout and dining area for residents, physicians, nurse practitioners and physician assistants. With a small kitchen, exercise equipment, and a shower and changing room as well as tables and comfortable chairs, "it's a place for exercise, reflection, healing and eating," Linzer says.

Poplau says devoting space to provider well-being sends a message to staff. "I

WHY are physicians BURNED OUT?

think this shows the importance of it," she says.

2 DRILLING INTO DATA

One of the things HCMC's Office for Professional Worklife does is administer an annual survey to its medical practitioners (physicians, nurse practitioners and physician assistants) who have a half-time or greater appointment. Linzer and Poplau look at the results and drill deeper to see where problems exist. Then they take those findings to department leaders and look for solutions. "If the EMR [electronic medical record] is a problem, then we try to figure out ways to address the EMR," Linzer says. "If they haven't got enough coverage so people can go on leave, we try to figure out how to get more float staff. Some solutions are expensive. Some aren't."

Poplau says in one department, they discovered that a big stressor for clinicians who had young children was the fact that they couldn't get away from the office at the end of the day. They found a simple fix—schedule the last complex patient at 4 p.m. instead of 4:30 p.m. "The next year of the survey, their burnout score went from highest to one of the lowest," Poplau says, adding that the fix didn't cost money or affect patient access.

“**We're trained to be deficit-thinkers. We don't think about what's right with patients.**

Being a good doctor requires being in the deficit function all day. That bleeds over, and we see the world from the glass-half-empty perspective.”

—COREY MARTIN, MD

In another department, advanced practice nurses and physician assistants had the highest burnout scores. When they looked into why, they found that a key stressor was waiting for a response from a physician when they had a question. The solution was to identify a "doc of the day," someone with protected time to take their calls.

Linzer believes engaging clinicians in addressing the things that exasperate them most is key to promoting resilience. And he says, "I think all the things that make people angry can be changed."

3 FOSTERING CONNECTIONS

Colin West, MD, PhD, a researcher with Mayo Clinic's Program on Physician Well-Being, was talking with his colleagues about what they could do to promote well-being among Mayo physicians when they hit on the idea of having engagement groups. They knew loss of meaning in work was a key driver of burnout and they had heard from physicians across the country that they felt isolated. Older physicians said they recalled a time when there was a greater sense of community in medicine. "We thought, maybe we could do something to help physicians connect with each other," he says, "but not just to meet without an agenda because that could devolve into a gripe session."

14

little things

Individuals and organizations are finding that resiliency is the sum of many small changes and steps rather than one big one. Here are some of their ideas for reducing stress and improving practice.

1 Use wide screens. HealthPartners finds they reduce time wasted scrolling through the electronic health record.

2 Don't schedule complex patients at the end of the day. A stressor for doctors in one department at Hennepin County Medical Center was trying to get out of work on time, especially when dealing with a complex patient. The last slot for a complex patient is now 4 p.m. rather than 4:30 p.m.

3 Seat doctors with their nurses so they can communicate throughout the day. HealthPartners teams find that when doctors and nurses regularly interact, their to-do lists are shorter at the end of the day.

4 Walk outside. Peter Dunphy, MD, of Essentia Health, says getting out of the building at midday separates you from your work and gets you in touch with nature. Similarly, the University of Minnesota's Meghan Rothenberger, MD, advises internal medicine residents not to take the tunnels between buildings so they get some outside time.

5 Unplug. Rothenberger says taking even a moment during the day to turn off (or at least get away from) the cell phone and computer is valuable.

6 Take the stairs. If there are two things nearly everyone agrees on, it's that exercise and mindfulness are critical to well-being. The University of Minnesota's Brian Muthyala, MD, MPH, says he achieves both when he takes the stairs between patients. As he walks, he focuses on each step. When he emerges, he's cleared his head and done something good for his body.

7 Include spouses. Avera Health's Brad Kamstra, DO, says Avera includes nonmedical-provider spouses on the committee for its LIGHT program and invites them to educational sessions and retreats. He says his wife told him, "This is what's wrong with you" after she attended a session on burnout. "She saw the symptoms and what had brought me to that point," he says.

8 Be grateful. Buffalo Hospital's Corey Martin, MD, says that if he were to do just one thing to be more resilient, it would be to spend two minutes a day listing three good things that happened that day. "It's powerful, easy, simple," he says. Moreover, it works. "If you really try to incorporate gratitude, you'll be happy with what you have," he says.

9 Listen deeply. For HealthPartners' Anand Shah, MD, staying in the moment with patients involves "deep listening"—asking open-ended questions and not interrupting while the patient answers. "You'd think it would be more time-consuming, but it's not," he says. He describes how a patient cried as she expressed how grateful she was for his attention during a conversation about her taking diabetes medicine. "If I have experiences like this, it makes me joyful, which in turn makes me more resilient," he says.

10 Be upfront with others about your struggles.

"I definitely share my own personal struggles in trying to navigate a medical career with a family," Rothenberger says. She thinks that resonates with the internal medicine residents she works with at the University of Minnesota. "People like that I don't have a magic bullet, that it's a series of little things, of understanding of self and systems, that I have a story that I'm continuing to work on."

11 Watch for signs of burnout. Leaders at Avera Health realized staff were struggling with burnout when they noticed the number of physicians seeking help through their employee assistance program (EAP) was going up. "We found they didn't ask for help until they were on the far end of the well-being spectrum," says EAP director Mary Wolf.

12 Create a sanctuary. "One of the things I ask physicians to do is develop a sanctuary for themselves," Shah says. "For me, it's in my home. I don't have a man cave, but I do have a place where I go to sit quietly and reflect or read."

13 Keep a journal. Shah says he writes in his journal two to three times a week, spending about 15 to 20 minutes reflecting and putting his thoughts on paper. The practice gives him time to contemplate the week's events.

14 Set aside time. "If you're not intentional and don't take time out of your day, you don't have time," Shah says. "You have to be intentional about it. And be realistic. If it's even once or twice a week, whether it's exercising or meditation or taking vacations. It doesn't happen if you don't give it time." —C.P.

They came up with a plan to have six to 10 physicians meet every other week for a meal and discussion about an assigned topic related to burnout, well-being or resiliency. Each group would determine when and where they'd meet. No less than 15 to 20 minutes would be dedicated to discussion of one of the topics they chose.

With an endorsement from top leadership and a promise of financial support (Mayo provides \$20 per participant for the meals), they launched the program last October. Since then, more than 1,100 physicians have signed up. After six months, 97 percent of participants said it was a worthwhile activity and something that Mayo should continue. "Getting 97 percent of physicians to agree about anything is an accomplishment," West says. "That's telling us that it's meeting a need."

According to West, participants have said it's been "eye-opening" to learn that they're not the only ones who feel certain stresses. "It's fostering this sense of connection."

4 IMPROVING SYSTEMS AND PROCESSES

Being on a well-functioning team is critical to job satisfaction, says Beth Averbeck, MD, senior medical director of primary

care for HealthPartners, because no single person can accomplish all that's expected of health care providers today.

When Averbeck started at HealthPartners in 2005, its physician-satisfaction score on the American Medical Group Association's (AMGA) annual survey was low—in the 25th percentile, nationally. "That was a motivating factor for us to take a look at what we could do to help our physicians improve their practice," she says.

They began by standardizing processes so that if a staff member or patient went between clinics the experience was the same. Then they looked for ways to involve all members of the care team in working with patients. For example, when they noticed that patients began to explain their reason for their visit to the person rooming them, they formatted the EMR so the person doing the rooming could record what the patient was saying. The physician then could pull up the record, verify the information and ask clarifying questions.

At a number of clinics, they set up "flow stations," placing the nurse and the physician side by side, so they could talk between patients. When the physician goes in for the visit, the nurse can act on a re-

quest or get a test result. "What that does is help get those things done during the day instead of leaving all of that until the end of the day," Averbeck explains.

When Averbeck started working on streamlining systems, she thought they'd find one main fix. But she says that hasn't been the case: "It's a lot of different things that help in different ways." She points out that gaining 10 minutes here or 15 there adds up. "That's time that could be spent with a patient or when you could go home earlier. We want the time at work to be valuable time."

Since making the changes, Averbeck says, HealthPartners' physician-satisfaction score on the AMGA survey has been in the 75th percentile.

5 OFFERING COACHING

Coaching is one of the ways Sioux Falls-based Avera Health is attempting to support physicians and other staff. The idea emerged when Mary Wolf, EAP director and a trained therapist, noticed that physicians did not seem to find counseling appealing when they needed help with problems. They told her they thought it was too long a process and doubted it would yield results. That led Wolf to think coaching might be more appropriate. "It's a much more goal-oriented, momentum-building process," she explains.

Wolf got certified as an executive coach and now offers the service to any staff member who expresses interest. It's one of many ways Avera is attempting to promote staff well-being through its LIGHT (Live, Improve, Grow, Heal, Treat) program. She begins with an hour-long face-to-face meeting, during which she explains she's there to provide support and homes in on the problem. Two or three more sessions are conducted in person or by phone. During the sessions she keeps the focus on the issue, which can be work-related or personal. She also assigns homework (for example, reflecting and writing) to be done between sessions.

Strategies vary depending on the needs of the individual. For example, she helped one physician who was struggling with a work relationship map out ways to com-

why
are physicians
BURNED OUT?

“**The way medicine is practiced is traumatic.** The pressure, time crunch, late hours, large number of patients ... The thing that is going to make doctors well and less stressed is to work on how medicine is practiced in this country.”

—BRIAN MUTHYALA, MD, MPH

municate with the colleague and with administrators. She also took a more spiritual tack, helping the person visualize releasing the issue to “their higher power.”

Last year, Wolf provided 27 coaching sessions. One measure of their impact: two of the physicians she’s coached who were thinking of leaving Avera have decided to stay. Wolf is now training six other Avera staff, including three physicians, to serve as coaches.

6 Learning by Teaching

After one of their staff physicians was killed in a traffic accident two years ago, members of the medical staff at Buffalo Hospital were struggling, says Corey Martin, MD, director of medical affairs. Three months later, a pediatrician took his life in the hospital chapel. “That was salt in a wound that wasn’t healed over,” he adds.

Those two tragedies prompted the organization to send 15 of its leaders to a conference, where they heard Duke University’s J. Bryan Sexton, PhD, talk about resilience. He asserts that there are many simple things health care providers can do to care for themselves and build resiliency. “We left and said, What do we want to do with that?” Martin says.

One of the physicians who attended had the idea of not only going back and sharing Sexton’s ideas with the hospital staff but also with the community. Police officers, high school teachers, workers at Walmart needed to learn what they had learned. “So that was the day we thought of Bounce Back,” Martin says.

Bounce Back is both a Buffalo Hospital and a community-wide campaign to “improve health through happiness.” To launch it in 2015, Martin and a team of hospital leaders did 87 presentations to area businesses, schools and organizations in three months, explaining what resiliency is and its relationship to health. Then they rolled out the first “tool” for building resiliency, performing random acts of kindness. “Research shows that if you do a random act of kindness for someone, they’re happy for a day and you’re happy for two weeks,” Martin says. The next ones they rolled out were listing

WHY are PHYSICIANS BURNED OUT?

three good things and writing gratitude letters.

Martin says he and other physicians and nurses have gained from including the community in this work. “I don’t think there’s a better program out there that addresses burnout than this because what you’re teaching is what you’re learning yourself.”

7 Preparing the Next Generation

This fall, 140 internal medicine residents at the University of Minnesota are taking an online course called “Well-being and Resilience for Internal Medicine Residents.” Developed by the department of internal medicine in conjunction with the Center for Spirituality and Healing, it’s one of the ways program leaders are attempting to instill the idea that burnout is a serious issue and encourage residents to adopt practices that can reduce stress early in their careers.

Faculty had read the studies that showed half of internal medicine residents were burned out, and they had seen firsthand evidence of it. “We were noticing our own trainees were experiencing high levels of stress, burnout and anxiety,” says Brian Muthyala, MD, MPH, an assistant profes-

“**I think it’s the burden of time.** To do all you need to do, you need something like 22 hours a day if you’re going to hit all your quality metrics.”

—PETER DUNPHY, MD

sor of medicine who along with associate program director Meghan Rothenberger, MD, is working on the new curriculum. “They were needing to take leaves from work because of these issues.”

In addition to the online course, they’ve developed workshops, where they’re teaching trainees how to be resilient—by practicing gratitude, getting exercise, spending time in nature, eating right, etc. “We’re talking about really practical ways to deal with the stresses that they’ll experience in residency and throughout their careers,” Rothenberger says, adding that there’s no one solution that’s right for everybody.

In addition, they’re doing sessions on well-being with faculty at each of their training sites, encouraging them to consider ways they, too, can care for themselves and support residents.

Muthyala and Rothenberger plan to survey residents at different points in their training in order to learn whether the new curriculum is having an effect. Both expect the course to evolve over time. “I’m not so naïve to think that our residents will just all be well,” Muthyala says. “I hope we move the culture of the program a little bit, so people can talk about these issues more.” ➔

⑧ Finding Passionate Leaders

As part of its new effort to promote staff well-being, Essentia Health named physician champions for each of its regions. Peter Dunphy, MD, ambulatory care chief for the central region is one. And it's a role he is happy to take on. Dunphy says he's genuinely interested in well-being and burnout, not so much because he's struggled but because he finds joy in practicing medicine and wants others to feel that as well.

"It's hard work, tough work," he says of providing primary care, which he has done in the Brainerd Lakes area since 1981. "If you're going to do this well, you've got to come in refreshed.

You've got to be mindful that you're in that room. That's where your focus is." Dunphy says he works at well-being. For example, he breaks up the work day with walks or meaningful conversations with colleagues. And he does simple things such as thinking about the things for which he's grateful.

Dunphy also has a personal reason for wanting to champion well-being. Two of his three adult children are physicians. "So maybe I'm a little bit selfish," he says. "I want them to have joy."

Anand Shah, MD, a family physician who often speaks about burnout and resiliency at HealthPartners' events, and Brad Kamstra, DO, a family physician with Avera Health, have a different reason for their interest in preventing burnout. They've been there. "From my own personal experience of being burned out in the past, I realize that I wasn't even aware of it," Shah says. "There were no resources around me to make me aware that burnout is a big issue and what are the symptoms and signs that can help you recognize that you're burning out." Kamstra's story is similar.

WHY are physicians BURNED OUT?

Shah found his way back to wellness by attending retreats sponsored by the Center for Courage and Renewal, an organization founded by writer Parker Palmer that encourages people to find their true calling, Kamstra through Avera's LIGHT program. Since then, both have been on a quest to raise awareness about burnout and teach others how to prevent and recover from it.

Earlier this year, the Minnesota Hospital Association surveyed 14,000 physicians and other hospital staff with the goal of gathering statewide data on burnout. "I feel strongly that we need robust data regarding the drivers of burnout across Minnesota," says Rahul Koranne, MD, the association's chief medical officer. Koranne believes the state needs to take a process-improvement approach to combating burnout if efforts are to be successful. "We need to know what the drivers are and to track actions and results over time in order to continuously improve," he says.

Eventually, study results and data may guide organizations to the practices that are most effective for promoting resiliency and preventing burnout. In the meantime, much of what is being done is a matter of trial and error. Mayo Clinic's Colin West, who recently published a literature review in *The Lancet* in which he and his colleagues evaluated the effectiveness of vari-

“The main thing the physician wants to do is spend time with the patient. There are more and more external things that are invading the sanctity of the physician-patient relationship. I think that's starting to affect physicians more and more.”

—ANAND SHAH, MD

ous interventions, isn't concerned about that. "I don't think there's one single solution out there," he says.

West believes the real point of all of these activities is to get physicians and other health care providers to realize that taking care of themselves is not selfish. "Maybe the biggest concept we've had to grapple with as a profession is that it's not only OK for doctors to pay attention to their own well-being but it's an *obligation* that we pay attention to our own well-being," he says. "Because we can't take care of patients if we're not well ourselves." ■■

Carmen Peota is a Minneapolis writer and former editor of *Minnesota Medicine*.



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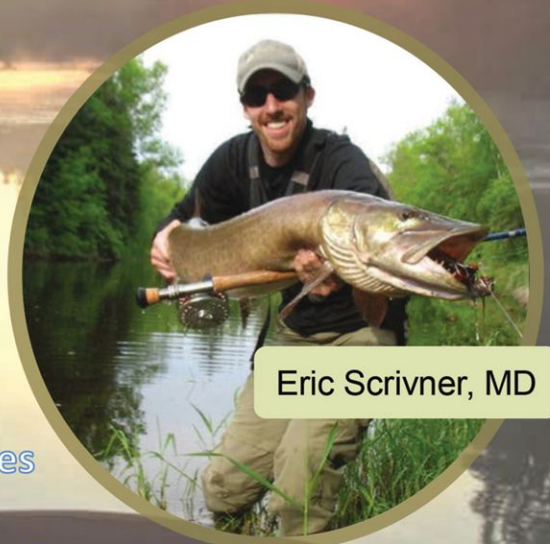
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Eric Scrivner, MD



Laying down my stethoscope

A family doctor ruminates on physician burnout and dreams of a health care revolution.

BY ANNE LIPPIN, MD

People ask me if I'm going back to "work" anytime soon. After I completed residency in 2000, I signed a contract for three-quarters time with one of the major health care organizations in the Twin Cities. I had my own dedicated RN—this sounds possessive, but I assure you, I was hers, too. Full-time status was considered to be 28 face-to-face hours with patients per week. That didn't include the hours spent on phone calls, charting, paperwork, prescription refills, etc.

I worked one week out of every eight in the hospital, loving the interaction with our clinic's patients and the hospital specialists with whom I'd trained. I took overnight call about three times a month, sometimes more. Those nights were rough, often with little sleep and hours spent at the hospital.

I dictated my patient visits and handed the tape to our transcriptionist. The notes were filed in the chart in reverse chronological order. The paper-bound story of a patient's medical life.

When my son was born in 2005, we were up to 34 face-to-face hours as the expectation for full-time employment. Benefits were

dependent on your FTE (full time equivalent) status. I was my own transcriptionist at that point. We had transitioned, painfully, to an electronic medical record. Physicians were encouraged to develop "dot phrases," generic pre-fab chart note chunks, that could be plunked into anyone's note and tweaked as necessary. It's like calling paint-by-number "art."

We were paid on "production," how much revenue we generated for the organization. "Work Relative Value Units" or wRVUs is the technical term.

RNs were a hot commodity by that time, sequestered into specialized roles like Coumadin management and phone triage. Providers (we were mostly physicians with a couple of nurse practitioners) worked with medical assistants, some of whom floated to different clinic sites.

So when our son was born, my husband and I each had uncoordinated, independent, overnight call schedules. I asked for some time away from call with a concomitant decrease in pay. The organization turfed the question back to my colleagues. They declined. I can understand it—if I didn't take call and the organization offered no support, the burden fell upon my partners.

I gave my notice. But the organization contractually required 90 days. Eventually, the 90 days were up. I wanted to continue working for the organization in urgent care sporadically, but that meant I couldn't cash in on the physician retention benefit plan. I worked in urgent care twice and haven't worked for money since. We are fortunate. We can make it on one income.

Last time I checked, "full-time" was considered to be 38 face-to-face hours per week. That still doesn't include phone calls, charting, paperwork, prescription refills, etc. Part-time employment is not allowed unless you were grandfathered in. Patient visits are scheduled at 20-minute intervals. Yes, you're expected to do a complete physical exam in 20 minutes on that 64-year-old three-pack-per-day hypertensive, dyslipidemic diabetic who just moved here from Florida and arrives with an oxygen tank and a wheelchair. Providers work with whatever medical assistant is assigned to the patient care team for that day.

"When are you going back to clinic?" you ask.

After the revolution.

Physicians and mid-level providers are the way health care organizations make money. Presidents do not generate revenue. CEOs do not generate revenue. Nurse managers do not generate revenue. When organizations find themselves in tough times financially, they whip the doctors. Work more! See more patients! Get us more money!

Pay-for-performance is a particularly devious form of torture. Your pay is docked if your patient's blood sugar control isn't perfect or if their blood pressure isn't within certain parameters. Physicians are held personally responsible for patient outcomes. On one level, of course this is appropriate. Physicians must practice ethical, up-to-date medicine. On another level, I can't control

whether my patients actually take their medication, follow my exercise advice, or smoke right before their appointment.

What would a revolution look like? Here are my thoughts:

- Make appropriately trained medical scribes available to all providers. Physicians shouldn't be typing their notes. This is an unbelievable waste of the specialized knowledge of the sole income generators in a health care system.
- Transition to a single-payer, universal health care system. You can't imagine the convoluted mess of human resources necessary to support our idiotic patchwork-payer system.
- Allow part-time employment and build in support for life circumstances (illness, leave, surgery, birth, family emergencies).
- Reward thinking specialties (family medicine, internal medicine, pediatrics), not just procedure-driven specialties (gastroenterology, surgery, etc).
- Make medical school free. I graduated from med school in 1997 with \$60,600 of debt. I paid most of it off during residency. The average medical student today graduates with \$170,000 in debt. And we wonder why there is a shortage of primary care docs.
- Study upper-level administrative pay and figure out a rational approach.
- Create an economic environment where it's possible for a family to live on one average income.

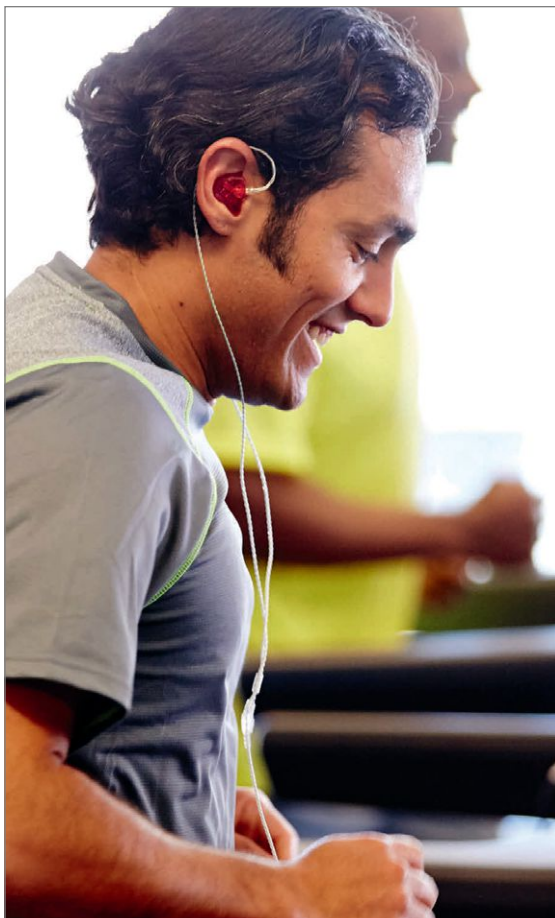
- Give some control back to docs. If I want 45 minutes for a complete physical, let me have it. I know I won't be paid as much. So be it.
- Make pay dependent on the quality and complexity of care as well as production. But figure out the right ways to measure quality.
- Off-load providers. Providers should only be doing provider-level work. This sounds arrogant to some, I realize. Gee, the poor doctor doesn't want to room her own patient. In terms of office efficiency, though, this is the only system that makes sense. Develop protocols for refills, triage, rooming, updating chart info AND FOLLOW THEM. PharmDs can do a lot of medication management for chronic disease.

There's a lot more to the revolution. And I have a headache.

In short, it's great that attention is being paid to physician burnout and stress. However, the answers lie not in fixing the physicians, making them more "resilient," but in fixing the health care system that's burning them out. **MM**



Anne Lippin is a Minnesota physician, wife, mother, writer, musician and collector of roadkill taxidermy. She lives in St. Paul with four males—two human, two canine. Anne blogs at annelippin.com and tweets @AnneLippin. The above article was adapted from her August 8, 2016, blog post, which was viewed by more than 13,000 readers.



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Remembering for my father

A son recalls duck hunting with his father and brother—and understands why no one cared whether they brought home fowl.

BY JOHN W. WILSON, MD

The day begins at 2 a.m. with the screeching of my alarm clock. It feels like I just went to bed. It's early December 1981, and a fresh layer of snow has just fallen. My father, older brother and I are going duck hunting. The Nevada State Legislature is not yet in session so my father, who is a state senator from Reno, has reserved this weekend to spend time with my brother and me. Ignoring my morning somnolence, our chocolate Labrador jumps about, barking and drooling. He couldn't be more excited.

My brother and I pack what seems like an enormous amount of hunting gear, lunch and extra clothes into our two-toned aging Chevrolet Suburban.

At 13 years of age, I am the smallest of the three of us, which relegates me to the middle of the bench-style front seat, between my father and brother. With this unenviable position comes the responsibility of holding cups for my brother, who is in charge of pouring coffee from a thermos. I hold the cup, my brother pours the coffee, and Dad drives over a bump in the road, causing the hot coffee to spill onto my lap. At this time, I am not yet a coffee drinker, but my hunting companions depend on this small boost of morning "rocket fuel," and the spilling of coffee is an inevitable part of our routine on these outings.

After an hour-and-15-minute drive, we arrive at our destination within the Carson Lake Wetlands. It is still dark and very cold outside. We put on our waders, jackets, hats, gloves and hunting vests and collect our duck decoys, shotguns, shells and lunch. As we hike along ditches, over dikes and through the boggy marshes of the Carson sink, I feel a piercing sensation on my legs. Another small hole in my waders. I should have expected this. I guess the rubber patch I put on the prior weekend did not hold. On the brighter side, my pants are already wet from the spilled coffee, so how much worse can it get?



We arrive at a large pond within the marsh and spend the next 15 minutes pitching our decoys across the open water in a pattern, as directed by my brother. As the sun begins to emerge over the mountain horizon, we take cover at different points among the tall "tule" grasses lining the pond. In the blind, I scan the morning sky for ducks, entertain the restless dog, and move my legs back and forth to ward against the cold chill that's now settling in thanks to my wet pants.

It then begins: "Three coming in at 9 o'clock," "two moving across low at 4 o'clock," "four moving fast and away at six." We use a military-style system to call out the location and direction of ducks in flight. Twelve o'clock is east and six o'clock is west. Nine o'clock is north; three o'clock is south.

There are numerous ducks in the morning air now, and I imagine we sound like a squadron of fighter pilots over Germany during an epic World War II air battle.

My brother is the best shot among the three of us, followed by my father. I am a distant third. After every shot, our dog races into the open water looking for the prized bird to retrieve. He quickly becomes frustrated if any of us miss our shots and readily abandons one family member for another, hoping his new "master" has better aim. Needless to say, on days we are not hitting any ducks, our energetic dog has been known to run off and retrieve other hunters' downed birds. I'm not sure which is worse, the humiliation of being a poor shot or the embarrassment of seeing our dog retrieve someone else's duck.

After the morning hunt, we eat our lunch, which is the standard cold bologna sandwich on Wonder bread and an oatmeal raisin cookie. To say that my father likes oatmeal raisin cookies is an understatement. Whenever we are hunting, hiking or just spending outdoor time together, they are always present. If there is any question about whether Dad is coming along on a trip, we look no further than the lunch packed to find out. The presence of oatmeal raisin cookies is confirmation.

After a quick lunch (after all, how much time does one really want to eat bologna sandwiches?), we spend our afternoon walking around other parts of the marsh, searching for hidden pockets of ducks. The walking helps me regain some degree of sensation in my cold, wet legs.

Duck hunting in Nevada is never easy. Unlike California's Sacramento Valley and the Pacific Northwest, the northern half of Nevada is arid and cool. That comparatively reduces the numbers of migratory birds traveling over the eastern half of the Pacific Flyway.

Therefore, to hunt ducks in northern Nevada, lots of patience, walking, perseverance and perhaps some degree of luck are generally required.

As the sun begins to set, we pack up our decoys and walk back to the truck. Somehow, the walk back to the Suburban always seems much longer than the morning trek out. It's getting dark, and the drive back to Reno is quiet except for the barely audible news reports coming from the AM car radio. Upon arriving at home, we pluck and clean our ducks before placing them into the freezer. (When we return empty-handed, we avoid this task, which offers notable consolation.)

Growing up, our hunting trips often became fodder for embarrassing family "roasting sessions." The stories include my brother getting the Suburban stuck in the marsh mud and burning out the transmission, Dad packing the wrong gauge of shotgun shells, Dad calling our dog a "son of a bitch" (a rather accurate reflection for any male dog), and my mistaking a jet-airplane flying four miles overhead for a duck. There was the one about the dog chewing holes in the decoys, the dog chewing on my waders (maybe that's where the hole came from) and the dog silently passing gas in the truck on the drive home during the cold winter months with the windows rolled up. Our dog was indeed the genesis for many of our stories—all the more reason to include a dog on any trip.

My father, now an octogenarian with Alzheimer's disease, has retired from his law practice, and his days in the Nevada State Senate were etched long ago into the Legislature's historical record. Since he can no longer recall those stories about our hunting and fishing trips, my siblings and I tell them. They often make him laugh out loud. Although his memory is largely gone, he still loves a good story. Perhaps our hunting and fishing tales are more entertaining now and grow taller with each telling.



The author (right) with his father and brother in the early 1980s, around the time of the hunting trip.

PHOTO COURTESY OF JOHN WILSON

As I look back on those hunting trips, I find myself remembering not the number of ducks we collected but rather the time spent with Dad and my brother in the Nevada outdoors. I realized years later that my father did not care how many birds we took

home. His motivation was spending time with us laughing, growing and building memories together.

Now that his memory is failing, we are the keepers of those memories. We give them back to him in the form of the stories we tell. With dementia, there's the danger that the pages of one's personal history can become permanently lost in time. Storytelling with my father opens a relative time

portal for us both, allowing us to relive and enjoy those memories together. MM

John Wilson is associate professor of medicine in Mayo Clinic's Division of Infectious Diseases.



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ZDogMD headlined Friday night with a highly entertaining performance.

More than 200 attend successful Annual Conference

PHOTOGRAPHY BY KATHRYN FORSS



Blanton Bessinger, MD, shares a laugh with medical student Risa Visina.



Andrea Westby, MD; her poem was featured during Thursday's Hippocrates Cafe.



The conference featured a good mix of practicing physicians and medical students from across the state.



Damon Tweedy, MD gave the Friday morning keynote.

More than 200 physicians, residents, medical students and guests attended the 2016 MMA Annual Conference September 23 and 24 in St. Louis Park. They were treated to an energetic keynote by ZDoggMD, a thought-provoking presentation on health disparities by Damon Tweedy, MD, as well as a variety of educational sessions and policy discussions.

Other highlights included:

- A talent show featuring performances by five MMA members. Mayo Medical School student Elizabeth Fracica, who sang “Good Morning, Baltimore,” took first place. Judges included ZDoggMD, former presidents Cindy Firkins Smith, MD, and David Thorson, MD. Other competitors included Matthew Kruse, MD, who performed stand-up comedy; Randy Rice, MD, who played Harry Chapin’s “Cats in the Cradle” on his guitar; Gabe Komjathy, MD, who played an original composition on his guitar; and Joan Madden, MD, who performed a trumpet duo with Richard Baldinelli.
- A student/resident poster competition. University of Minnesota Medical School student Robin Sautter won \$500 for her poster “Identifying Barriers to Physical Activity for Somali Women in Willmar, Minnesota.”
- Hippocrates Cafe hosted by member and MPR contributor Jon Hallberg, MD. The show featured professional actors reading members’ prose and poetry plus music.

Four awards presented

Three physicians and one legislator were honored with MMA Foundation awards for going above and beyond.



Distinguished Service Award

Patricia Lindholm, MD, a Fergus Falls family physician, received the Distinguished Service Award, which is given to a physician who has made outstanding contributions to medicine, the MMA and the physicians of Minnesota during his or her career.

Lindholm (shown here with Board Chair Doug Wood, MD) served as the MMA’s president in 2010-2011. Currently, she is president of the MMA Foundation’s Board of Directors and is serving a four-year term on the Board of Medical Practice.

During her 25 years as an MMA member, she has served on the Board of Trustees and represented the MMA on the MN Community Measurement Board. She also served on an MMA Professionalism Advisory Team that met in 2013 and 2014 to work on improving the culture of medicine in Minnesota by promoting collegiality and networking opportunities.



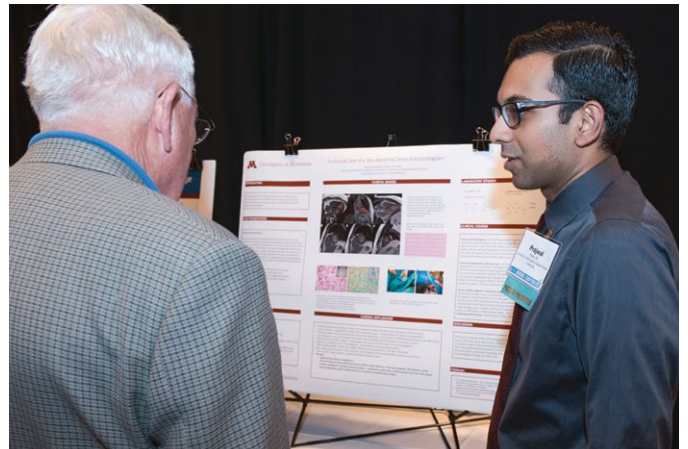
President's Award

Sally Trippel, MD, a board-certified preventive medicine physician at Mayo Clinic, received the President’s Award, which recognizes a physician who has given much of his or her free time to help improve the association.

Trippel (shown here with Immediate-Past President Dave Thorson, MD) has been a member of the MMA’s delegation to the American Medical As-



MMA’s Got Talent: Joan Madden, MD, plays a trumpet duet with Richard Baldinelli.



Nearly 20 students and residents presented posters at the conference including Prajwal Reddy, MD (right).



Dr. Charles Reznikoff answers questions after his presentation on opioid prescribing.

sociation for the past 20 years. She has a long history of service and leadership on MMA committees including those for women physicians and public health. She currently participates on the AMA's public health caucus as well as its women's caucus.



Community Service Award

George Schoephoerster, MD, a St. Cloud geriatrician, received the Community Service Award, which recognizes civic-minded individuals who demonstrate tremendous altruism in their personal life.

Schoephoerster (shown here with Patricia Lindholm, MD) was honored for his volunteer work. He has been a long-time volunteer for the Alzheimer's Association of Minnesota and North Dakota,

working to support those with Alzheimer's disease and their caregivers. He also helped create and continues to volunteer with ACT on Alzheimer's, a collaborative of individuals and organizations set on improving the diagnosis, care and community support for people with Alzheimer's disease and other dementias.



James H. Sova Memorial Award

Sen. Melisa Franzen (DFL-Edina) received the James H. Sova Memorial Award, which honors a non-medical professional who has made a significant contribution to the advancement of medicine. The award is named after a long-time lobbyist for the MMA who died in 1981.

Franzen (shown here with Dave Thorson, MD) has been on the front lines for the past two legislative sessions leading the

charge to reform medication prior authorization (PA)—a major priority for the MMA. She represents the cities of Bloomington, Eden Prairie, Edina and Minnetonka. She has guided PA reform legislation through the Senate, while it has been held up in the House.

House of Delegates reconvenes

After a three-year hiatus, the MMA House of Delegates (HOD) reconvened and voted to approve most of the governance changes that were first approved in 2013.

One change they did not approve is the dissolution of the HOD. Instead, delegates voted for a two-year break to further assess the role of the MMA's Policy Council, particularly its size, how it engages the membership and its relationship to the Board of Trustees.

The HOD will reconvene in 2018 with the "sole purpose of reviewing the effectiveness of the Policy Council and the future of the House of Delegates."

During more than two hours of debate, delegates reaffirmed their support for all-member elections of MMA leaders, the Annual Conference with its focus on policy



Medical student Alexander Feng speaks during the House of Delegates.

development, education and networking, and a smaller Board of Trustees. The delegates were not ready to eliminate the HOD altogether and expressed a need for further study of the Policy Council's effectiveness and ability to engage members.

The Policy Council also will study its optimal size, the scope of its charge and other metrics during that period.

Next year's Annual Conference is scheduled for September 22 and 23 at the Rochester Convention Center.

News Briefs

Board approves health disparities recommendations

At its September meeting, the MMA Board of Trustees approved a series of recommendations from the MMA's Health Disparities Work Group, including a call for the association to help Minnesota physicians reduce racial and ethnic health disparities in their practices.

The 17-member work group, chaired by Fatima Jiwa, MBChB, a pediatrician in Rogers, presented the following seven recommendations to the board:

- Provide education to physicians, residents and medical students in an effort to raise knowledge/awareness of racial and ethnic health disparities
- Provide resources to assist physicians in addressing racial and ethnic health disparities in their practices
- Recognize that factors such as health care financing, the composition of the health care workforce, employment, housing and public transportation have had a negative effect on the quality of and access to care by members of racial and ethnic minority groups. Also recognize that health disparities are a consequence of structural and institutional racism in hospitals and health systems in the state
- Support initiatives that will lead to increased funding for social services that are essential to a patient's health and will help them overcome health inequities
- Support efforts to incorporate information on health disparities, health equity and the social determinants of health into undergraduate and graduate medical education at the University of Minnesota and Mayo medical schools
- Support an increase in the number of underrepresented minorities in health care fields
- Have the MMA's board assess MMA policy and advocacy recommendations through a health equity lens as a way of maintaining a focus on reducing health disparities.

On the calendar

Event	Date	Location
Duluth Legislative Dinner	November 16	Midi Restaurant, Fitger's Inn, Duluth
Day at the Capitol	February 15	St. Paul

Check the MMA's website (www.mnmed.org/events) for more information and to register.

The next steps will be for the MMA to convene an advisory group to assist with implementing these recommendations.

New officers installed on MMA board

New MMA officers were installed at the September Board of Trustees meeting. **David Agerter**, MD, a family physician with the Mayo Clinic Health System-Austin, was inaugurated as MMA president. **George Schoephoerster**, MD, a geriatrician in St. Cloud, was named president-elect. **David Thorson**, MD, a family physician with Entira Family Clinics in White Bear Lake, assumed the role of immediate past president.

Dionne Hart, MD, a psychiatrist in Rochester, and **Abigail Ring**, MD, a family physician in Detroit Lakes, join the Board as Trustees. **Mike Tedford**, MD, an otolaryngologist from Edina, was re-elected as a trustee.

AMA delegates include **David Estrin**, MD, a pediatrician from Plymouth, and **David D. Luehr**, MD, a family physician from Cloquet. Alternate delegates include **Will Nicholson**, MD, a hospitalist at St. John's Hospital in Maplewood, and **Cindy Firkins Smith**, MD, a dermatologist and CEO of Affiliated Community Medical Centers in Willmar. Estrin, Nicholson and Smith all were incumbents.

MMA files friend-of-court brief in medical malpractice case

In mid-September, the MMA filed a "friend of the court" brief in *Howard v. Svoboda*, a case regarding the "informal conference" statute that permits early and informal exchange of information in medical malpractice cases. Early information-sharing often helps cases move toward resolution more quickly.

The MMA's brief argues that the statute should continue to be construed broadly and simply, and that a narrow interpretation would expose physicians to risk and needlessly pull them away from clinical practice.

The MMA's Commission on Professional Liability initially recommended that the informal conference statute be passed into law. The brief continues to advocate for the "informal conference" as a helpful, physician- and patient-friendly element of medical malpractice litigation.

CMS provides more guidance on MACRA

The Centers for Medicare and Medicaid Services (CMS) announced in September that physicians will have three start date

options for performance reporting under the new physician payment system created by the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA).

In a draft regulation issued last April, CMS proposed that physicians begin reporting under the Merit-based Incentive Payment System (MIPS), or through the advanced alternative payment model option, on January 1, 2017. In the September announcement, CMS confirmed that the final MACRA regulation, which is expected to be published later this fall, will exempt physicians from any risk of payment penalties in 2019 if they choose one of three MIPS reporting options in 2017. They are:

1. A "testing" option that may be particularly attractive to practices that have not had experience submitting data to CMS through the Physician Quality Reporting System and other programs. CMS noted that practices choosing this option can avoid negative payment adjustments in 2019 as long as they submit some data.

2. A partial-year option that would allow practices to report data for less than the full calendar year. This option would give practices the opportunity for a "small" positive payment adjustment in 2019.

3. A full-participation option that would allow practices to report data for the full 2017 calendar year. This option would give practices the opportunity for a "modest" positive payment adjustment in 2019.

Participating in an advanced alternative payment model is another option, but most physicians are unlikely to meet its stringent criteria in 2017. Qualified participants using those models will be eligible for 5 percent incentive payments in 2019.

MMA resources on MACRA can be found at www.mnmed.org/advocacy/Key-Issues/MACRA.



Sen. Tony Lourey

Rep. Jennifer Schultz

Rep. Mary Murphy

MMA to host annual Duluth legislative dinner on November 16

The MMA will host a dinner for Duluth-area physicians, residents and medical students on November 16 from 5:30 to 7:30 p.m. in the Midi Restaurant at Fitger's Inn, where they will be able to meet with area legislators in person. Sen. Tony Lourey, Rep. Jennifer Schultz and Rep. Mary Murphy are all scheduled to attend. It's a great opportunity for physicians and physicians-in-training to share their views on political issues facing medicine in Minnesota. To register, please visit: www.mnmed.org/duluthdinner.

VIEWPOINT

Healthiest in the nation?

One of the MMA's goals is for Minnesotans to be the healthiest people in the nation. According to the Commonwealth Fund, whose Health System Scorecard provides a regular assessment of health system performance, we are on track to meet that goal. The most recent scorecard ranked Minnesota first among all states in the nation.

This ranking is based on multiple measures including access to care, prevention and treatment of illness, avoidable hospital stays and the costs associated with them, and mortality and lifestyle factors.

Despite our overall high ranking, the data point to areas where we need to make significant improvements. We rank 27th in terms of adults who have a usual source of care (only 76 percent of adults in Minnesota identified a usual source of care; 89 percent reported a usual source of care in the state with the best ranking).

Minnesota also ranked 27th for children ages 19 to 35 months who received all recommended doses of seven key vaccines. Our rate was 71 percent; the state with the best ranking had a rate of 85 percent. Some of these differences reflect disparities in access related to geography and income and delivery system inequities.

So, despite the top overall ranking, there is still work to do. The MMA Board of Trustees recently approved a comprehensive set of recommendations from

its Health Disparities Work Group to address gaps in access to and quality of care. Details on this work, led by Fatima Jiwa, MBChB, can be found on the MMA website (www.mnmed.org/about-us/committees-task-forces/health-disparitiestask-force).

Along with our work on disparities, we are focusing our legislative efforts on improving vaccination rates. Last session, we made the elimination of conscientious objections to vaccines one of our top three priorities. Strategies for improving HPV vaccination rates are under review by the MMA Policy Council.

But comprehensive success also requires physician involvement at the local level. One of the best examples of local leadership is the work of the Stearns Benton Medical Society and Pat Zook, MD. Dr. Zook's hard work to improve vaccination rates in the St. Cloud area was recognized by the Centers for Disease Control and Prevention in 2015.

The resources of the MMA are available for all members to use in order to improve the health of Minnesotans one community at a time. Let us know about successful efforts in your communities!



Douglas Wood, MD
MMA Board Chair

Comprehensive success
also requires physician
involvement at the
local level.



SPECIAL SECTION

MOVING MEDICINE FORWARD



MINNESOTA
MEDICAL
ASSOCIATION

2016 ANNUAL REPORT



DAVE THORSON, MD

FOCUSED ON SUCCESS, DESPITE CHALLENGES

Physicians have faced many challenges this year.

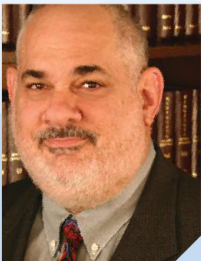
The first was a late-starting, abbreviated legislative session. We were able to maintain the repeal of the provider tax but we once again faced strong resistance to our efforts to reform medication prior authorization. We also began the process of strengthening the state's immunization laws through discussion and information.



DOUGLAS WOOD, MD

We continued to wrestle with the problem of **prescription opioid abuse**. Abuse of these medications has been on the MMA's radar for several years but we need to re-double our efforts. In July, our Board approved a series of recommendations from our public health committee that we are confident will begin to turn the tide. We also continued our education efforts on opioids with a series of excellent free webinars produced with the Steve Rummier Hope Foundation and the University of Minnesota Medical School.

We devoted much of this year's Annual Conference to **professional satisfaction**, another issue that affects many physicians. We need to continue supporting our peers who struggle with their work-life balance and develop solutions that have a positive impact on our practices.



ROBERT MEICHES, MD

In addition, MMA work groups made great strides this year on two tough issues:

1) exploring ways to support physicians as they address **racial and ethnic health disparities** in their practices, and 2) improving the **training and support for preceptors**.

On a national level, we celebrated the end of the flawed Sustainable Growth Rate formula and are now trying to educate members on how the **Medicare Access and Children's Health Insurance Program Reauthorization Act of 2015 (MACRA)** will affect our practices. The MMA has reached out to clinics across the state either in person or via webinars to help physicians learn about the new regulations. We're making progress.

What this all adds up to is the fact that physicians need the MMA now more than ever. We will continue to work to make Minnesotans the healthiest in the nation and the best place to practice medicine, and to advance the medical profession. But we need your help. If you are already a member, thank you. If you are not, please join us.

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M Medical School, Minneapolis; **Jeremy Springer,**
MD, Park Nicollet Clinic Creekside, St. Louis Park

PRESCRIPTION OPIOID MANAGEMENT TASK FORCE

CHAIR **Beth A. Baker, MD, MPH, FACOEM** Canadian
Pacific Railway and Specialists in OEM/MN Spine
Rehab, Minneapolis

MMA POLICY COUNCIL

CHAIR **Ernest Lampe, MD**

TWIN CITIES MEDICAL SOCIETY APPOINTEES

Leah Anderson (medical student)

Stuart Cameron, MD

Ramnik Dhaliwal, MD (resident)

Mark Eggen, MD

Alexander Feng (medical student)

Jessica Heiring, MD

Evan James (medical student)

Chris Johnson, MD

Ken Kephart, MD

Lisa Mattson, MD

Christopher Reif, MD

Doug Pryce, MD

Caleb Schultz, MD

Neil Shah, MD

Craig Walvatne, MD

ZUMBRO VALLEY MEDICAL SOCIETY APPOINTEES

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Robert Grill, MD

Dionne Hart, MD

Kathryn Lombardo, MD

Kim McKeon, MD

Noel Peterson, MD

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Tom Witt, MD

Jay Widmer, MD

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Elizabeth Bilden, MD

Christopher Thiessen, MD

STEARNS BENTON MEDICAL SOCIETY APPOINTEES

Stephen Cragle, MD

Kim Tjaden, MD

RANGE MEDICAL SOCIETY APPOINTEE

Michael Baich, MD

MEDICAL STUDENT SECTION APPOINTEE

Elizabeth Fracica

RESIDENT AND FELLOW SECTION APPOINTEE

Matthew Kruse, MD

YOUNG PHYSICIANS SECTION APPOINTEE

Meltiady Issa, MD

MMA PRESIDENT-ELECT

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Ernest Lampe, MD

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MAKING MINNESOTANS

Better health for Minnesotans begins with a strong relationship between patients and their physician.

The MMA does its part by focusing its limited resources on specific initiatives that tackle the issues that affect the most people and require the most attention.

THE OPIOID CRISIS FRONT AND CENTER

The abuse of prescription opioids once again took center stage in 2016 when it was determined that Prince, the iconic Minneapolis musician, died of a fentanyl overdose in April. The MMA Board of Trustees voted in July to re-instate the MMA Prescription Opioid Management Advisory Task Force. The group will meet through the beginning of 2017 to consider solutions, including: mandatory use of Minnesota's Prescription Monitoring Program when appropriate; required education/additional training with respect to opioid prescribing when appropriate; and expanding the number of buprenorphine providers. The task force will also be charged with reviewing the recommendations from the Minnesota Department of Human Services' Opioid Prescribing Work Group to help guide the MMA's response.

In addition, the MMA continued its education efforts on the epidemic. We worked with the Steve Rummeler Hope Foundation, a Minneapolis-based nonprofit, and the University of Minnesota Medical School to create a series of free webinars to educate physicians on a variety of topics relating to pain, opioids and addiction. They are available for CME credit on the MMA website.

In addition, MMA member **Charlie Reznikoff, MD**, led an educational program on the changing landscape of opioid prescribing at the 2016 Annual Conference.

MEDICAL CANNABIS EDUCATION CONTINUES

On July 1, the state observed the one-year anniversary of its medical cannabis program. At the time, 1,588 patients had signed up to participate and 579 physicians, physician assistants or advanced practice nurses had registered to certify patients. Also on that day, intractable pain was officially added as a qualifying condition for which patients can receive medical cannabis. The MMA continued to monitor the growth of the state's program and to educate its members about medical cannabis. In June, *Minnesota Medicine* published a special issue on the program and provided initial findings from the state about its use and success. The issue also examined the addition of intractable pain.



HEALTH DISPARITIES WORK GROUP TACKLES BIG DIVIDE

Disparities between the health of the general population and that of certain racial and ethnic groups are a reality in Minnesota. In an effort to determine how we might close the gaps, the MMA formed a work group in late 2015 with **Fatima Jiwa**, MBChB, as chair. The group surveyed physicians to determine their awareness of racial and ethnic disparities in the state and find out what resources are needed to assist them in addressing these disparities in their practices. The group was scheduled to submit its recommendations to the MMA board during the third quarter of 2016.



THE HEALTHIEST IN THE NATION

The work group also organized a two-part webinar series on implicit bias featuring member **Stephen Nelson**, MD, director of the Hemoglobinopathy Program at Children's Hospitals and Clinics of Minnesota. Nelson presented on implicit bias and served on a health disparities panel at the 2016 Annual Conference.

PRECEPTORS KEY TO PREVENTING PRIMARY CARE SHORTAGE

The MMA has been addressing the pending primary care physician shortage for several years now. In late 2015, we focused our attention on preceptors and formed the MMA Preceptor Initiative Advisory Group, chaired by **Anne Pereira**, MD, MPH, FACP, and **Jeremy Springer**, MD. As part of our initiative, we partnered with the University of Minnesota Medical School to interview health system leaders across Minnesota to assess medical student clinical training sites. We then determined what was needed to ensure that capacity meets the current need. We also surveyed preceptors across the state to learn what type of training and support they need.



The initiative yielded:

- A **community preceptor toolbox** that will include training videos and tip sheets for preceptors
- An **ad in *Minnesota Medicine*** thanking preceptors for their efforts
- **Recognition of preceptors** at the 2016 Annual Conference

STRENGTHENING IMMUNIZATION LAWS

Many consider childhood vaccinations a landmark public health advancement, saving millions of lives. Although Minnesota leads the nation in a number of metrics of good health, many physicians are shocked to learn that the state has one of the country's weakest immunization laws, allowing parents and guardians to exempt their children from required vaccines because of "conscientiously held beliefs." The MMA is seeking to change the law to allow exemptions only for medical contraindications. The MMA significantly raised the profile of the issue at the Legislature in 2016 and looks forward to strengthening Minnesota's vaccine laws in 2017 and beyond.



In order to make Minnesota the best place to practice medicine, we need to focus on ways to allow physicians to be physicians.

That means spending less time dealing with administrative burdens and more time working with patients.

MAKING MINNESOTA

PRIOR AUTHORIZATION EFFORTS CONTINUE, DESPITE RESISTANCE

The MMA continues to work to reform medication prior authorization (PA). In 2016, we focused on illustrating how the PA process hurts patients (the previous year's efforts revolved around how much of a burden it was for physicians). We emphasized the following points:

- Prior authorization hassles are prohibiting patients from getting the medications they need in a timely manner.
- Patients with chronic conditions can incur higher health care costs as a result of prior authorization.
- The MMA doesn't seek to eliminate prior authorization altogether, rather we want to make sure patients know which drugs are covered and that changes to their drug coverage are limited.
- The MMA wants to limit the number of times a patient must go through prior authorization for the same drug.



Similar to the 2015 legislative session, our bill stalled in the House when representatives refused to give it a hearing. We will bring the bill back in 2017.

MACRA PASSED, NOW WHAT?

Congress passed the Medicare Access and Children's Health Insurance Program Reauthorization Act (MACRA) with strong bipartisan support in April 2015. Among MACRA's notable provisions is the permanent repeal of the Sustainable Growth Rate (SGR), the flawed formula used for calculating updates to the Medicare physician fee schedule. Provisions in MACRA replace SGR with two paths for determining future Medicare payment



for physician services: 1) the Merit-Based Incentive Payment System (MIPS) and 2) alternative payment models (APMs).

In 2016, the MMA offered education for physicians about the new payment pathways through a webinar featuring national expert Harold Miller, informative articles in *Minnesota Medicine* and a series of in-person presentations by MMA Director of Health Policy Janet Silversmith. Work will

THE BEST PLACE TO PRACTICE

continue in 2017 to prepare physicians and practice administrators for the law's regulations.

PROVIDER TAX REMAINS ON TRACK FOR REPEAL

Although set for repeal at the end of 2019, some lawmakers proposed re-instating the provider (or sick) tax during the 2016 legislative session. The MMA went to work, arguing that it is regressive, selective and falls most heavily on the sick. Plus, it would add more than \$720 million to the overall cost of health care in 2021, if it continues past its current sunset date.

In 2011, the MMA successfully lobbied for its repeal, which passed with bipartisan support and was signed by the governor. The MMA has opposed the 2 percent tax on medical services providers since its inception in 1992 and will continue to do so until it is finally repealed.



Advancing professionalism in medical practice can happen in a number of ways. The MMA has been promoting professionalism by helping physicians become more resilient to burnout, collaborating with specialty societies and hosting networking events where physicians and physicians-in-training can meet and talk about medicine in a relaxed atmosphere.

ADVANCING

CONTINUING TO ADDRESS PROFESSIONAL SATISFACTION

According to national statistics, about half of all physicians say they have experienced burnout. That's disturbing to the MMA and everyone in health care. We have been addressing this issue for several years now, first drawing attention to it, then educating physicians on how to combat and address it. Preventing burnout was a focus at the Annual Conference. Keynote speaker **ZDoggMD** spoke directly to the topic. The event also included sessions on building resiliency. This will continue to be an emphasis for the association in the coming years.



DAY AT THE CAPITOL DRAWS A BIG CROWD

More than 100 physicians and physicians-in-training lobbied their legislators in St. Paul on March 23 as part of the MMA's annual Day at the Capitol event. Despite the snow, physicians and students gathered from across the state to meet with their legislators and educate them about the need to reform medication prior authorization, ensure the sunset of the provider (sick) tax and strengthen the state's immunization laws.



At the 2016 Day at the Capitol, a group of physicians meets with state Sen. Kari Dziedzic (DFL-Minneapolis).

PHOTO BY KATHRYN FORSS

THE MEDICAL PROFESSION

TALKING SHOP IN A SOCIAL SETTING

The MMA held physician socials in the Twin Cities, Rochester and Duluth this year. These free events, located near the state's medical schools, attracted a good mix of physicians-in-training as well as physicians of all ages. Approximately 140 attended the Twin Cities event at Surly Brewery in Minneapolis; 110 attended the Rochester social at the Cambria Gallery. (Planning for a Duluth event continued as this Annual Report went to press.) The socials provide an opportunity for physicians, residents and medical students to gather over food and drinks and discuss their profession.



PHOTO BY KATHRYN FOSS

With no set agenda, physicians and physician-in-training gathered at socials across the state.

PARTNERING WITH SPECIALTY SOCIETIES

The MMA continues to strengthen its partnerships with specialty societies throughout the state. We recently worked with the Minnesota Dermatological Society to address a scope-of-practice issue related to esthetician licensure. Prior to the 2016 legislative session, the MMA and eight specialty societies met to discuss priorities and strategies. In addition, the MMA provides lobbying services to four specialty societies and meets with their individual boards to discuss how we can better work together. It's in the best interest of all physicians to have a united front with the MMA and the state's specialty societies.

A MARCH TOWARD LOWER HEALTH CARE COSTS

The Minnesota Action to Reduce Costs in Healthcare (MARCH) steering committee began developing recommendations for MMA policy/action to address several factors associated with high health care costs and affordability. The group is focusing on administrative inefficiencies, waste, and burden; prescription drug spending; unnecessary care; and, time permitting, other key drivers of health care costs.

MEMBERS

You got into this profession to make a difference. And you do, every day.

But there are some physicians who take their commitment to the human condition to another level. This year, the MMA recognizes seven physicians and one medical student who have gone beyond their day-to-day activities to improve health care in Minnesota.

MACARAN BAIRD, MD

Baird is a long-time volunteer with the MMA. He has served on the board, on committees and is currently the chair of the MARCH (Minnesota Action to Reduce Costs in Healthcare) initiative. This group's charge is to address administrative inefficiencies, prescription drug prices and unnecessary care, among other issues. Baird is also a member of the MEDPAC Board of Directors. In 2013, he was honored for his extraordinary involvement with the MMA's Distinguished Service Award. This is on top of Baird's role as head of the Department of Family Medicine and Community Health at the University of Minnesota.



ALEXANDER FENG

The University of Minnesota medical student isn't allowing his studies to keep him from being active with the MMA, especially when it comes to advocacy. Feng is currently a member of the MMA's Policy Council, a MEDPAC board member and an Advocacy All-Star. He has also been active with the AMA's Medical Student Section serving as a member of the AMA's Health Information Technology Task Force Committee. Feng is also a University of Minnesota Chapter Officer of IHI (the Institute for Healthcare Improvement), an independent non-profit organization based in Cambridge, Mass. Known for the Triple Aim, IHI is dedicated to the improvement of health and health care. Feng expects to receive his MBA and MD in 2018.



FATIMA JIWA, MBCHB

Jiwa is chairing the MMA's efforts to address Minnesota's racial and ethnic health disparities. In addition to her leadership on this issue, she has served on the MMA's Board of Trustees since 2013 and has been a member of the MMA's Governance Evaluation Work Group for the last three years. She also was involved with the MMA's Minority and Cross-Cultural Affairs Committee until it was sunset. Outside the MMA, Jiwa serves on the Minnesota Chapter of the American Academy of Pediatrics' Poverty/Disparities Work Group. Jiwa is a pediatrician at Partners in Pediatrics in Rogers.



DANIA KAMP, MD

In recent months, Kamp has amped up her volunteerism on behalf of medicine in Minnesota. This year, she is serving as president of the Minnesota Academy of Family Physicians. She is also a member of the MMA's MARCH (Minnesota Action to Reduce Costs in Healthcare) initiative. In addition, Kamp testified before the Senate on behalf of medication prior authorization reform this past legislative session. When she's not busy volunteering her time, Kamp practices family medicine including obstetrics at Gateway Family Health Clinic in Moose Lake.



MARILYN PEITSO, MD

This MMA Board of Trustees member recently received the 2016 Distinguished Service Award from the Minnesota chapter of the American Academy of Pediatrics. The St. Cloud pediatrician has held a number of volunteer positions. She was a member of the MMA's Choosing Wisely Advisory Committee and is currently treasurer of the MMA Foundation's Board of Directors. Last year, Peitso served on the state's Health Care Financing Task Force. She is also a past president of the Minnesota Chapter of the American Academy of Pediatrics.



MAKING A DIFFERENCE

ANNE PEREIRA, MD, MPH, FACP, AND JEREMY SPRINGER, MD

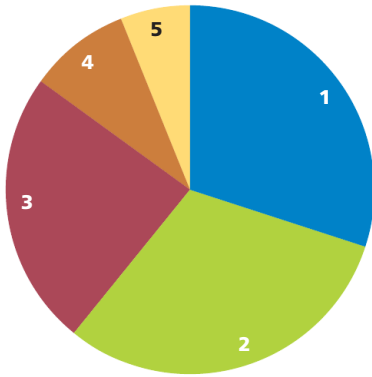
Minnesota needs more physicians. Pereira and Springer are using their time and energy to make sure that happens by increasing the number of preceptors across the state who can help train future physicians. Pereira and Springer co-chaired the MMA's Preceptor Initiative Advisory Group, which met from September 2015 through May 2016. They also were members of the MMA Primary Care Physician Workforce Expansion Advisory Task Force (Springer served as chair). When she's not volunteering for the MMA, Pereira is assistant dean for clinical education at the University of Minnesota Medical School and practices internal medicine at Hennepin County Medical Center. Springer is a family physician at Park Nicollet, and an assistant professor in the University of Minnesota's Department of Family Medicine and Community Health. He also directs the University of Minnesota Methodist Hospital family medicine residency program and serves as medical director of continuing medical education for Park Nicollet. Both have testified before the legislature on health care issues.

**NEIL SHAH, MD, FAAD**

In a relatively short time, Shah has become one of the most passionate voices at the Capitol and at the MMA. He serves on the MMA's Policy Council and was a member of the MMA's Telehealth Task Force. Although he is a dermatologist, Shah has strongly pushed the MMA on childhood immunization issues. He also helped organize a fundraising meeting with House Speaker Kurt Daudt days before the start of the 2016 legislative session to emphasize the importance of maintaining the provider tax repeal. Shah practices at Clarus Dermatology in St. Anthony.

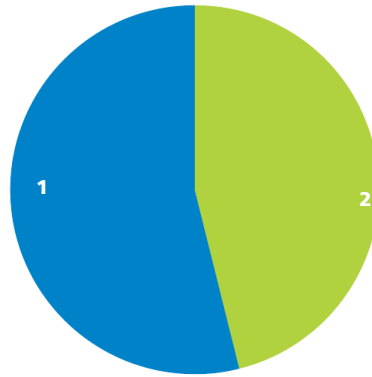


2016 FINANCIAL HIGHLIGHTS



How your dues are used

- 1 GOVERNANCE 27%**
MMA Board, AMA delegation
- 2 ADVOCACY 29%**
Legislative and regulatory lobbying, payer relations, quality, public health
- 3 COMMUNICATIONS 21%**
Minnesota Medicine, *MMA News Now*, website, special reports
- 4 MEMBERSHIP 18%**
Member relations, Annual Conference, outreach, education, events
- 5 OTHER 5%**
Accreditation, co-sponsorships, credentialing, component society staffing



Total MMA Revenue: \$3,700,000

- 1 DUES 54%**
Dues payments from members
- 2 NON-DUES REVENUE 46%**
Includes:
 - royalty income
 - revenue earned from advertising sold in *Minnesota Medicine*, *MMA News Now* and on the MMA website
 - revenue earned by the MMA for accreditation, sponsorships and lobbying support for medical specialties
 - income from investments, grants and events.

MEMBERSHIP OVERVIEW

Year	Total Members	Year	Total Members
2000	9,089	2009	11,330
2001	9,162	2010	11,250
2002	9,109	2011	10,106
2003	9,116	2012	10,347
2004	9,297	2013	9,998
2005	10,858	2014	10,309
2006	10,835	2015	10,257
2007	10,909	2016	10,171*
2008	10,969		

*Numbers as of Aug. 15, 2016

MEMBERSHIP

NORTH CENTRAL TRUSTEE DISTRICT 427
 South Park Region 59
 Stearns-Benton 249
 Upper Mississippi 85
 West Central 21
 Wright 13

NORTHEAST TRUSTEE DISTRICT 655
 Lake Superior 586
 Range 69

NORTHWEST TRUSTEE DISTRICT 238
 Headwaters 113
 Heart of the Lakes Region..... 56
 Red River Valley 69

SOUTHEAST TRUSTEE DISTRICT 3,525
 Freeborn 55
 Goodhue..... 72
 Rice 41
 Steele 63
 Wabasha 12
 Winona 15
 Zumbro Valley 3,267

SOUTHWEST TRUSTEE DISTRICT 623
 McLeod-Sibley 22
 Nicollet-Le Sueur 29
 Prairie 563
 Waseca 9

TWIN CITIES TRUSTEE DISTRICT 4,559
 At Large 144

TOTAL: 10,171

Includes: regular/active, retired, students, residents/fellows
 Note: Resident and Student numbers can fluctuate significantly throughout the year due to large additions or subtractions.



MINNESOTA
MEDICAL
ASSOCIATION

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Why all the angst?

To avoid burnout and ensure resiliency, we need to reframe our view of competition.

BY DAVID A. ROTHENBERGER, MD

Minnesota physician Tait Shanafelt, MD, authored a landmark paper that brought national attention to the issue of burnout in our profession in 2009.¹ Shanafelt, a Mayo Clinic internist, and his coauthors described the alarming number of the nation's surgeons struggling with burnout, harmful behavior, depression, poor quality of life and suicidal thoughts. The paper was based on a 2008 American College of Surgeons cross-sectional survey completed anonymously by 7,905 surgeons across the United States. The results were shocking: 40 percent of the respondents met diagnostic criteria for burnout, 30 percent screened positive for depression and 6.3 percent had considered suicide in the previous 12 months.

A more recent report showed a consistent national physician burnout rate of 46 percent, regardless of practice setting (whether the private sector, an academic medical center or a Veterans Affairs medical center).² Others have noted that burnout is not confined to specific specialties; however, physicians in some specialties appear to be at higher risk than others, and generalists appear to be at a higher risk than specialists.^{3,4}

Burnout contributes to drug and alcohol abuse, broken relationships, disruptive behavior at work and frequent conflicts in,

or withdrawal from, social interactions—all of which result in poorer quality of life.² As Mark Linzer, MD, and his colleagues from Hennepin County Medical Center in Minneapolis noted, the harmful impact of burnout extends well beyond individual physicians to family members, colleagues, co-workers and patients.⁵ Importantly, Linzer et al. observed that burnout leads directly to disruptive behavior, an increase in medical errors, poorer outcomes for patients, and high rates of physician and staff turnover, all of which damage the financial performance and reputation of the organizations for which they work.

Causes of burnout

The underlying causes of burnout are multifactorial, complex and not completely understood. A common theme in the literature is that major changes in society in general and in the health care delivery system in particular have created a highly stressful environment for physicians that can readily trigger a cascade of burnout.

Societal changes that have contributed to burnout include the way the role of the physician is perceived. In the past, patients were generally comfortable having their physician make treatment decisions and rarely questioned those decisions. By contrast, patients and their loved ones now

participate in decisions about their care. Safety and quality are expected outcomes of care.

Similarly, oversight by hospitals and regulatory agencies was once limited. If complications arose, the general assumption was that the physicians had done their best. But today, patients and their family members and advocates expect full transparency and accountability, especially if errors occur. And the public increasingly has access to performance metrics and comparative rankings of outcomes.

Our health care delivery system has also undergone fundamental changes that affect both physicians and patients. In the past, most physicians worked in solo or small-group practices that were independent from hospitals. Their compensation was derived largely from fees charged to patients for services. Today, more and more physicians are closely aligned with, or fully employed by, large hospitals, clinics or health care organizations.

Government and private payers increasingly link incentive payments for providers and facilities to improved performance defined by quality and cost. Private health insurers and other payers expect health systems to consistently deliver “value,” a term defined as safety, quality, plus patient experience divided by total cost of care

over time. Thus, physicians find themselves being held accountable not only by their patients but also by their employers and payers.

To survive, many health care organizations feel the need to grow their market share, further consolidating to form even larger systems and pressuring their employees, including physicians, to compete aggressively with other systems. Physicians are aware that large-scale strategies, far from increasing value and efficiency or improving safety and quality, often spawn divisiveness—eroding value and creating unnecessary costs. For example, some systems restrict patients' choice of providers and closely control their access to services.⁶

Physicians have been admonished to keep patients in “their” system, even if their professional opinion is that the patient may be better served by an expert in another system. If these physicians choose to discreetly provide their patient with the name of a physician who works for a competing system, they hope no one reports them for facilitating “leakage” of that patient from their system. Such a culture causes physicians to question their professionalism and to wonder whether it is moral to continue to work in such an environment.

These changes within society and health care have intensified tension within the medical profession and contributed to burnout. For the most part, we do not know how to effectively tame these stressors, responding instead with denial or anger, or by blaming “the system.”

A reframed view of competition

Fortunately, the growing awareness of burnout and its far-reaching sequelae is motivating the health care community to formulate strategies for preventing and alleviating the problem. Strategies include offering wellness programs, resiliency training, self-awareness workshops and leadership training aimed at helping the individual as well as implementing organizational efforts to improve workplace culture and operational efficiency and workflow.

Such strategies are well-intentioned and commendable—and they appear to be at least partially effective in alleviating the excessive stress arising from the many changes in our environment. But are they enough?

My hypothesis is that they are not. The burnout epidemic reflects our struggle to stay aligned with our profession's overarching commitment to do what's best for each patient while, at the same time, grappling with the need to think more globally about costs and populations, the altered expectations of the public, and the demands of our corporate and government leaders. Everyone of good will wants to build a sustainable, more equitable health care system for all, but physicians and their patients are at the crossroads of innumerable conflicting priorities.

I believe the current strategies by individuals and organizations to prevent or at least alleviate burnout may fail unless we simultaneously reframe our view of competition. We must address the insidious aspects of a fundamental shift in how physicians are being motivated to do their work. Reframing the competition model that is currently promoted by many executives could help physicians maintain a sense of purpose, thereby preventing burnout.

We must resist and reject the call, both covert and overt, from our corporate leaders to make our colleagues in other systems our enemies. A collegial mindset is much more befitting of the caring, patient-centered essence of our calling as physicians. Bill George, the former CEO of Medtronic, highlights in his book *Discover Your True North* the importance of grounding ourselves by looking inward to define, clarify and reaffirm our core values as a person and as a professional.⁷ He implores each of us to set aside a few minutes each day to clear our mind, assess the alignment of our life and our values, accept our own unique frailties and imperfections, accept that much in the world is beyond our control, accept our role in the current “mess,” and step up to incrementally change the environment in which we work and live.

The call from our corporate leaders to ruthlessly compete with our colleagues in other health care systems is not our call. Instead of allowing ourselves to be forced into a “fight to the death” competition, we need to think differently.

For the vast majority of physicians, the changes in operating and financing our health care system are outside of our interests and influence. Yet as conscientious professionals, we can push for a model in which we collaboratively compete. We can still work independently, within our own institutions and areas of expertise, to be the first to find better ways to manage processes of care or assess outcomes, develop new techniques and devices to improve care, conduct research that leads to new understandings of the mechanisms of disease and therapies, and more effectively educate and train the next generation of physicians. We then need to share that information with our colleagues through the medical literature, at professional meetings and in direct consultations, so they, too, can fine-tune their care of patients. That is the essence of professionalism. We do not need to pursue the all-too-common corporate model of competition that defaults to zero-sum strategies, which, in the long run, often prove to be ineffective and costly. Instead, we can purposefully add value to the medical world through collaborative competition that privileges the sharing of information.

The late Steve Jobs, one of the fiercest and most successful competitors in the world, experienced—but recovered from—burnout. At the 1997 Macworld Expo announcing Microsoft's \$150 million investment in Apple, Jobs provided a great example of moving away from zero-sum strategies when he said, “If we want to move forward and see Apple healthy and prospering again, we have to let go of a few things here. We have to let go of this notion that for Apple to win, Microsoft has to lose. We have to embrace a notion that for Apple to win, Apple has to do a really good job. And if others are going to help us, that's great because we need all the

(continued on page 48)

Not what we signed up for

Leaders need to understand what's driving physician burnout in order to address and prevent it.

BY LAURIE C. DRILL-MELLUM, MD, MPH

You may remember the grainy photo of the grieving ER doc doubled over outside a Southern California hospital that made the rounds on social media last year. The physician had just “lost” a 19-year-old patient and was later quoted by a friend as saying: “I worked on him until he died, and then I went outside and got down and cried, and then I got up and went back inside and tried to feel better so I can make other people feel better.”

This photo poignantly captured the extremes of emotion and devotion that characterize medicine on the front lines. What it couldn't convey was that the ever-expanding list of demands on today's physicians—filling out paper work, signing forms, documenting care in the EHR, for example—makes timeouts like this increasingly rare. These ever-increasing burdens on an already-overtaxed physician workforce pose a public health threat, as they are the root of a burnout problem that is driving people out of the profession and compromising patient care. Medical practice today doesn't feel like what we physicians thought we were signing up for oh so long ago.

The burnout phenomenon

Physician burnout appears to have reached epidemic proportions. The prevalence rate is 55 percent, according to Mayo Clinic researcher Tait Shanafelt, MD.¹ One cannot go more than a few days without seeing a piece about burnout among physicians in either the mainstream media or the medical press.^{2,3}

Physician burnout is believed to be an accelerant for the predicted shortage of physicians, which is expected to reach 90,000 by 2025, according to the American Medical Association. It also poses both clinical and economic risks. Although the issue is rightly engendering attention from medical leaders, administrators and the public, there is no “magic bullet” to fix it, as the causes of burnout are multifactorial—training that is punishing, workflow challenges exacerbated by the mandated/imposed use of EHRs, decreasing time allotted for patient care, increasing workload for decreasing pay, work-life imbalance.

In his book *A Hidden Wholeness*, Parker Palmer discusses what he calls the “tragic gap.” It's the place between “what is” and “what is possible,”⁴ and it's where many of us in medicine find ourselves standing. It is the gap between what feels like a beat-up version of our mission to heal and serve and what we truly want—to help others

using our expertise, our hearts and our presence.

The physician mindset

Burnout is real, and in order to address it, leaders first need to understand what's driving it. It's helpful to look at what we know about what human beings need. Daniel Pink, in his book *Drive*, says it's quite simple: People need a sense of purpose, the opportunity to develop and demonstrate mastery, and control over their work or environment.⁵ Edward Deci, PhD, developed a “self-determination theory” based on years of research around motivation and performance.⁶ He, too, discovered that competence and autonomy were required for motivation. He also found that a sense of “relatedness” or being a part of something bigger than oneself was a key factor in motivation. A number of years ago, Harry Harlow, PhD, who conducted research on infant rhesus monkeys at the University of Wisconsin, found that connection is more important than food,⁷ and Abraham Maslow, PhD, asserted that we have physiological, safety, social and esteem-developing needs.⁸

It's also helpful to understand that physicians tend to have certain personal-

ity traits that might predispose them to feelings of dissatisfaction with the current health care environment. Lee Lipsenthal, MD, author of *Finding Balance in a Medical Life*, wrote that physicians tend to be competitive, have obsessive-compulsive behavior patterns, tend toward introversion and social isolation, and have high needs for control and autonomy.⁹ Psychiatrist Sara Charles, MD, also notes that physicians exhibit obsessive-compulsive personality features including perfectionism, preoccupation with order, control and excessive devotion to work and productivity.¹⁰ In addition, Glen Gabbard, MD, describes how physicians' compulsiveness—in the form of doubt, feelings of guilt and an exaggerated sense of responsibility—may manifest in both adaptive and maladaptive ways.¹¹ That is, some of these traits serve physicians and their patients well, while others lead to increased self-criticism, anxiety and depression.

Dan Ariely, PhD, and William Lanier, PhD, in a companion piece to a recent study of burnout and satisfaction with work-life balance by Shanafelt, discuss three factors affecting those in contemporary medical practice.¹² First, physicians are working in an environment of asymmetrical rewards. In many cases, a good treatment outcome is presumed, so there may be no real acknowledgement or expression of appreciation for the physician's training, expertise and experience. Yet when something goes wrong, a physician may experience the collective wrath of patients, families, employers, insurance companies and, even worse, their colleagues. Second, Ariely and Lanier discuss the loss of autonomy in medical practice, which leads physicians to feel defeated when they are trying to put their minds, hearts and souls into their practice. Third is the cognitive scarcity in medical practice. Ariely and Lanier note that we've turned medicine into a production-line-like endeavor, when it really should be a research and development activity.

Reinventing practice

In order to change medicine to make it more sustainable for the long haul, we

need to take a high-level view of how we got to where we are and where we need to go. Don Berwick, MD, founder of the Institute for Healthcare Improvement (IHI), gave a keynote talk at the IHI forum in December 2015, during which he proposed that it's time to enter a new era in medicine.¹³ He described the first era as focused on professionalism, trust and the prerogative of physicians. It was about noble intent, a sense of duty and beneficence. Physicians held special knowledge and privileges and were self-regulating. But those early days of medicine were synonymous with enormous variation in practice, outcomes and cost; there also were many errors and much waste. Autonomy didn't always mean that patients were getting the best available care, as there were no reliable checks and balances. This resulted in the development of patient safety and quality efforts, including the creation of physician-owned malpractice insurance companies, with efforts to "get our arms around" risk management and patient safety.

Berwick described the second era as the time when medicine became focused on money and metrics, rather than trust. It was about accountability, scrutiny, inspection and control of physicians. Measurement became rampant, and a "carrots and sticks" approach to the management of physician behavior evolved. The protocol-centered practice that grew out of this doesn't feel good to physicians. In fact, it's demeaning and demotivating. Given our understanding of what people need when it comes to motivation and meaning, it is certainly a factor in the current burnout epidemic.

Berwick believes we need to move into what he calls the "moral era" of medicine. He advocates stopping excessive measurement, abandoning complex incentives and decreasing the focus on finance. He encourages recommitting to improvement science, embracing transparency, protecting civility, listening—really listening—to patients and rejecting greed. He notes that we need to focus on the foundation of medical care—the relationship between

the one who seeks it and the one who provides it.

I agree that we need to move to a system that is people-focused and team-centered. William Osler, MD, one of the founders of Johns Hopkins Hospital, stated that: "It is much more important to know what sort of patient has a disease than what sort of a disease a patient has." I would add that it's also important knowing something about the personalities and needs of physicians.

For leaders in health care, it is imperative to understand something not only about the current reality with respect to physician burnout, but also about the basic needs of people and of physicians in particular. Organizations need to monitor physician burnout and post results where they can be seen, such as on a dashboard for organizational health. There needs to be leadership in the C-suites of medical organizations along with physician champions to address this crisis. Physicians on the front line of care need to be engaged and to have their "pain points" addressed. Mayo Clinic's Stephen Swensen, MD, has developed a "Listen-Act-Develop" model for engaging physicians in this work.¹⁴ It includes listening to identify and understand specific drivers of burnout; empowering physicians to address the top drivers of burnout in their particular work setting; developing and supporting physicians in this work; and repeating this process as an ongoing improvement cycle.

Organizations also can address the challenges created by EHRs; create options for flexible scheduling or coverage; create space physically and metaphorically to discuss errors as well as the challenges and joys of medicine; and provide space and equipment for exercise, relaxation and connection with colleagues.

One resource for organizations wishing to address physician burnout is the AMA STEPS Forward program (www.stepsforward.org). Its website has research, tools, protocols and resources to aid any medical organization committed to this work.

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Not what we signed up for

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Conclusion

Physician burnout is a significant and growing phenomenon that needs to be addressed at the leadership level. The problem will not be solved by benign neglect; we must, as leaders, act now to effect important changes in the way we treat those charged with caring for all of us—our physician workforce. It will not be easy or simple, but we must try. **MM**

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Why all the angst?

(continued from page 45)

help we can get. And if we screw up and we don't do a good job, it's not somebody's fault. It's our fault."⁸

Conclusion

I believe that reframing our view of competition—by fostering professional collaboration, both within and among institutions, and by widely sharing information for the benefit of physicians and patients everywhere—will help contain the burnout epidemic that threatens our profession. Despite countless stressors, medicine remains extremely rewarding. But what motivates most physicians, including surgeons, is not ruthless competition, not regal salaries, not relentless regulations. As Daniel Pink asserts in his book *Drive*, truly healthy motivation is not about money, power or prestige.⁹ Instead, it's about autonomy, creativity and purpose.

Our profession still offers the opportunity for a relatively autonomous, creative and purpose-filled career, but only if it doesn't overwhelm us first! **MM**

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The Psychiatric Assistance Line

Six-Month Follow-up on Consultations to Primary Care

BY TODD ARCHBOLD, LSW, MBA

The shortage of child and adolescent psychiatrists in the United States has resulted in more and more patients presenting to primary care clinics with mental health concerns. Consequently, clinicians often find themselves dealing with issues outside their expertise. The Psychiatric Assistance Line was created in 2014 to connect primary care clinicians with mental health professionals for consultations and provide assistance with psychiatry referrals. This article looks at the use of the service and outcomes following its first six months of operation.

In 2012, the Minnesota Department of Human Services began funding an initiative to support the assessment, triage and treatment of children and adolescents with mental illness in the primary care setting. In July 2014, PrairieCare Medical Group became the sole provider of this service.

Called the Psychiatric Assistance Line (PAL), the service was created in response to the shortage of child and adolescent psychiatrists and other specialized mental health practitioners in the state. That shortage, which is not unique to Minnesota, has shifted the burden of providing mental health care to primary care clinicians, many of whom feel ill-equipped to manage complex psychiatric illnesses during brief office appointments.

Because upwards of 50% of primary care visits involve behavioral health needs that may or may not be apparent to the patient or provider,¹ it is imperative for primary care clinicians to have access to experts and referrals in order to best serve these patients. The Psychiatric Assistance Line offers such resources. This article describes the service, who is using it and

outcomes following its first six months of operation.

What is PAL and Who Uses it?

The Psychiatric Assistance Line is staffed by full-time clinical social workers from PrairieCare Medical Group who are specially trained in triage and assessment. When psychiatric involvement is needed, the social workers have immediate access to PrairieCare's pool of psychiatrists who are board-certified in adult and child and adolescent psychiatry. They also have access to the Fast Tracker, a database managed by the Minnesota Psychiatric Society to help providers and community members find mental health specialists in their area who have openings in their schedules.

The Psychiatric Assistance Line offers both on-demand telephone and online services. Approximately 60% of providers who contact PAL call the service directly; 40% access it online. Most of the professionals who use PAL are metro-area pediatricians. They comprise 70% of the total consultation volume. Nurse practitioners comprise 13% and family physicians 6%. Other health care professionals and patients' family members account for the

remaining 11%. Since 2014, PAL has provided 476 consultations to 290 providers at 154 locations.

The types of cases that prompt calls to PAL range from basic requests for consultation on psychotropic medication management to requests for more immediate assessment and stabilization of symptoms in patients with severe mental illness. Anxiety, depression and attention deficit hyperactivity disorder account for 68% of all consultations. Other diagnoses include autism spectrum disorder, psychosis, adjustment disorder, bipolar disorder and PTSD.

The most common recommendations from the consultation team are adjusting a medication and initiating therapy if a therapist is not currently involved in a patient's treatment. Although primarily designed for children and youths, PAL has served patients as young as 3 and as old as 39 years of age. Seventy-seven percent of the initial 476 consults involved children and youths between 3 and 21 years of age, of which 59% were male and 41% female.



FIGURE 1

Adjustments to treatment plan

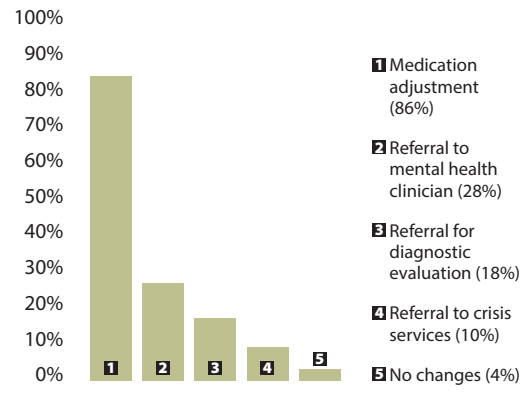


FIGURE 2

Outcomes of PAL consultation

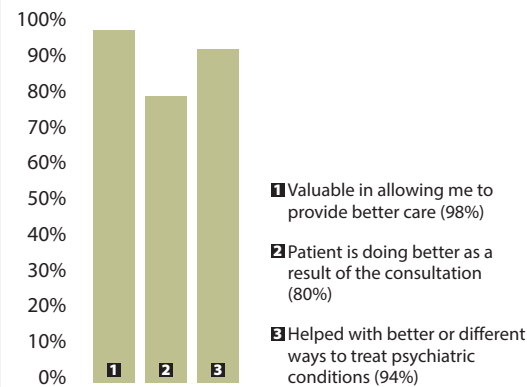
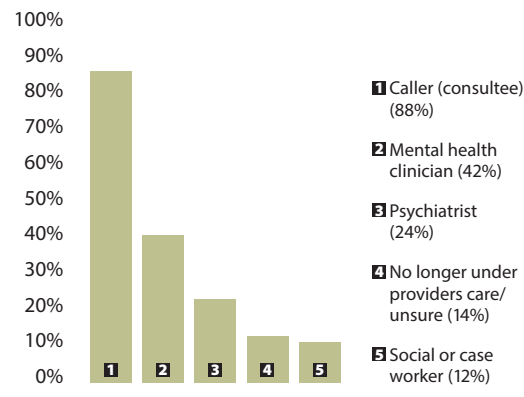


FIGURE 3

Care providers at six-month follow-up



Follow-up Survey Results and Discussion

In May 2015, the PAL team began sending follow-up surveys to primary care clinicians six months after a consultation. The

nine-question electronic survey assesses how the patient is doing as a result of the consultation. Recommendations are recorded in the PAL database at the time of the consultation. The follow-up survey verifies which adjustments were actually made (Figure 1). Analysis of the first 50 survey responses found the percentage of consultations in which PAL recommended medication changes (86%) is consistent with the number of respondents who reported adjusting a medication. Similarly, therapy was recommended in 32% of PAL consultations, and 28% of respondents reported having made a referral to a mental health clinician. This suggests a high rate of follow-through by primary care providers based on the consultation recommendations.

Ninety-eight percent of the clinicians who completed the survey (49 out of 50) reported that the PAL consultation was “valuable in allowing [them] to provide better care for [their] patient” (Figure 2). Eighty percent confirmed that their “patient is doing better” as a direct result of the PAL consultation. The remaining 20% responded simply as “neutral” (meaning the patient’s condition remained unchanged). When asked if the consultation helped the clinician find better or different ways to treat psychiatric conditions, 94% said it did. These findings, combined with provider satisfaction data, suggest that PAL has improved primary care providers’ ability to treat children and youths

with mental illnesses, and that patients are doing better as a result of this service.

The survey also asked who is currently providing care to the patient who received the consultation. The findings show that

88% of patients were still seeing the same primary care provider who called for the consultation (Figure 3). Fifty-two percent were also receiving specialized services from another clinician including one or more of the following: a psychiatrist (24%), a mental health clinician (42%), or a social worker or caseworker (12%). In 22% of the cases, a patient was being cared for by three or more clinicians including the primary care provider. Co-management of complex cases by both primary care and mental health clinicians has been shown to result not only in a better patient experience and improve outcomes, but also to reduce the total cost of care for those individuals over time.²

Conclusion

The Psychiatric Assistance Line is designed to empower primary care clinicians to treat patients with psychiatric conditions in a timely and cost-effective way. Our six-month follow-up surveys showed consultations between primary care clinicians and PAL social workers allow patients to receive quality care in a familiar environment without the wait and cost associated with seeing a child or adolescent psychiatrist. It is estimated that each successful consultation can mitigate costs by up to \$3,500.

Our findings suggest that PAL is increasing access to care and that its use is resulting in patients receiving better care because of the high rate of follow-through after each consultation. **MM**

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Sulfide Mining and Human Health in Minnesota

BY EMILY ONELLO, MD, DEB ALLERT, MD, STEVE BAUER, MD, JOHN IPSEN, MD, PHD, MARGARET SARACINO, MD, KRIS WEGERSON, MD, DOUGLAS WENDLAND, MD, MPH, AND JENNIFER PEARSON, MD

Sulfide mining (specifically copper-nickel sulfide mining) represents a significant departure from Minnesota's iron mining tradition. Sulfide mining can produce acid waste and sulfates that mobilize the release of heavy metals into the environment. These metals include known neurotoxins such as lead and mercury. Mining activities also create airborne fibers and pollutants that can contribute to increased morbidity. The short- and long-term effects of exposure to these substances on human health should be considered in present and future sulfide mining proposals. In addition, Minnesota physicians need to understand the potential adverse mental and physical health effects of sulfide mining on mine workers and residents of communities near mining operations.

The Duluth Complex is a geological formation that contains deposits of copper, nickel and palladium group metals. It is located at the eastern end of the Mesabi Iron Range in northeastern Minnesota.¹ PolyMet Mining plans to build an open-pit mine in the northeastern part of the state to recover those valuable metals. Other mining companies are also exploring mineral deposits and preparing proposals for extracting them.

During the past three years, multiple organizations representing health care professionals have voiced concern about the potential effects of copper-nickel mining on human health. The Minnesota Medical Association, Minnesota Public Health Association, Minnesota Nurses Association and Minnesota Academy of Family Physicians have each endorsed deeper inquiry

FIGURE 1

Metal sulfide oxidation sequence using pyrite as an example

Pyrite (FeS_2) is exposed to air (O_2) and water (H_2O)

A sequence of reactions occur creating sulfate, ferric hydroxide and hydrogen ions.

Additional chemical reactions occur involving pyrite, iron sulfate and water, resulting in the release of sulfuric acid.

Sulfuric acid promotes release of other metals from rock and causes harm to aquatic ecosystems.

into the potential health effects of sulfide mining, and specifically of copper-nickel mining. Although the majority of debates about sulfide mining in our state have been framed as “environment versus jobs,” the impact on human health needs to be a part of these discussions.

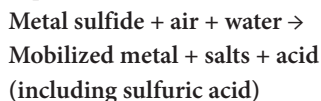
Sulfide mining has significant potential for the release of toxic chemicals into the environment. These include a number of chemicals identified by the World Health Organization as being of major public health concern: arsenic, asbestos, cadmium, lead and mercury.² Given this ominous list, and the possible synergistic effects of co-exposure to more than one of these chemicals, it is important that physicians understand why concerns are being raised about this type of mining. ➔

Source: Jacobs JA, Lehr JH, Testa SM. Acid Mine Drainage, Rock Drainage and Acid Sulfate Soils: Causes, Assessment, Prediction, Prevention and Remediation. Hoboken, NJ: John Wiley & Sons; 2014

How Acid Mine Drainage is Generated

Sulfide mining differs significantly from iron ore (taconite or ferrous) mining because it has the potential to generate acidic pH. Copper and nickel typically are bound to sulfur in rock. Because of this sulfur bond, they are described as sulfide minerals.³ The chief iron-bearing minerals in iron mining are iron oxides and iron carbonate,⁴ neither of which are sulfide minerals. Typical iron ore in Minnesota is relatively poor in sulfide minerals and contains minerals that actually buffer acid generation. Minnesota has not experienced large-scale release of toxic metals from iron mine waste into the environment.

However, both iron and sulfide mining operations do involve the excavation of millions of tons of rock in order to acquire a fractional amount of desired product. The ore is then processed to yield the desired metal. The surface mine site as well as mining wastes (overlying material, waste rock and “tailings”—fine-grained materials left over after the metals of interest are extracted) are exposed to moisture and atmospheric oxygen. When the sulfide mineral ore and wastes come into contact with air and water, chemical reactions occur that result in seepage of sulfuric acid, sulfate and toxic metals into surface and ground water. The general concept is as follows:



An example of the metal sulfide reaction is outlined in Figure 1. It demonstrates how sulfuric acid is generated in the presence of unearthed sulfide mineral rock.

Copper-nickel ore frequently contains iron sulfide minerals such as pyrite (FeS_2), one of the world's most common sulfide

FIGURE 2

Acid mine drainage



Iron hydroxide precipitating in a stream can be seen as the yellow-brownish discoloration sometimes referred to as “ochre” or “yellowboy.”

minerals. The atmospheric oxidation of pyrite ultimately results in the release of sulfuric acid.³ Under certain conditions, ferric iron (Fe^{3+}) remains soluble in acidic outflows and forms the reddish-orange to yellow ferric hydroxide ($\text{Fe}(\text{OH})_3$), a precipitate often recognized as the hallmark of waters containing acid mine drainage³ (Figure 2).

Aqueous sulfuric acid is released into the surrounding environment and leaches heavy metals from the rock. The release of sulfuric acid and heavy metals into surface and ground water, and eventually into streams and lakes, is called “acid mine drainage.” Many of the copper sulfide mines currently operating in the United States are located in the Southwest, a region that receives little rain and snow; thus, communication between surface and groundwater resources is limited. In wetter climates like Minnesota's, surface and shallow groundwater are more vulnerable to the negative effects of sulfide mining.⁵

Ore that contains commercially desired metals often contains other metals includ-

ing mercury, lead and arsenic, which are similarly bound to sulfur. Studies of the Duluth Complex formation suggest that leachate will likely include copper, nickel, cobalt and zinc.⁶

By understanding the general concept of sulfide mineral oxidation (Figure 1), one can see how toxic metals are mobilized from solid rock into the environment and can generate sulfuric acid.⁷ This reaction can result in ongoing leaching of metals from mine ore and waste rock, which can continue for centuries.

The Role of Microorganisms

Microorganisms are critical to acid mine drainage, as they accelerate the release of metals. These include extremophilic, sulfur-oxidizing and iron-oxidizing bacteria and archaea. One model organism is *Acidithiobacillus ferrooxidans*, which has been well-studied in the context of sulfide mining because it catalyzes ferrous iron to ferric iron. The regeneration of ferric iron exponentially increases the rate of breakdown of pyrite and sulfide minerals, increasing acid mine drainage.³

Select anaerobic microorganisms carry a gene that allows them to add a methyl group to inorganic mercury to create the most toxic form of mercury, methyl mercury. The environmental conditions that promote mercury methylation are complex and not completely understood, but they often are associated with bacterial sulfate reduction (anaerobic organisms that “breathe” sulfate as an alternative to oxygen).⁸ Methylation occurs in the sediments, wetlands, ombrotrophic (“cloud fed”) bogs and peat lands that are found in Minnesota's water-rich environment.⁹

Multiple variables affect the methylation reaction that creates methyl mercury including pH, temperature and concentrations of carbon, iron and sulfate. It appears that higher levels of sulfate (SO_4^{2-}) can enhance the rates of mercury methyla-

tion because they can stimulate bacterial sulfate reduction.⁸ Since acid mine drainage includes sulfate, it is important to understand that increases in sulfate can increase the amount of methylated mercury released into the environment, primarily when that sulfate stimulates bacterial sulfate reduction in anoxic environments.

Mercury Already an Issue in Minnesota

Mercury can be found in the air, sediment, water, soil and living organisms. Humans acquire mercury in two ways: by breathing gaseous mercury or ingesting methyl mercury, notably by eating fish and shellfish. Methyl mercury is found throughout fish tissue, including muscle, and is not removed by trimming the fat, avoiding certain parts of fish or using special cooking methods.¹⁰ Figure 3 shows the sequence of events by which release of anthropogenic sulfate can result in increased mercury levels in fish.

Mercury contamination of fish is a significant public health concern in Minnesota because of its neurotoxicity. In 2011, the Minnesota Department of Health found that one out of 10 infants in Minnesota's Lake Superior region were born with unsafe levels of mercury in their blood.¹¹ Many of Minnesota's northern waters are already legally classified as impaired because of the presence of mercury in fish tissue. This predates any potential mercury increases resulting from acid mine drainage.

Precise predictions of methyl mercury increases that would result from an influx of sulfate caused by mining can be challenging. However, concern is warranted because fishing remains important to Minnesotans,¹⁰ and fish is an important food source for both indigenous and non-indigenous residents. Rural and tribal residents may be at greater risk of mercury exposure than urban or suburban residents because of their higher rates of self-caught fish consumption.¹²

Mercury toxicity as a result of ingesting heavily contaminated fish can result in a range of neuropsychiatric issues including abnormal brain development and sensory distortions (paranoia and hallucinations). The developing brains of fetuses and children can experience the most profound and devastating consequences of exposure to mercury and other heavy metals.

Many illnesses of the brain and central nervous system are categorized as neurodevelopmental disorders. These include attention deficit hyperactivity disorder, learning disorders, autistic spectrum disorders, language disorders and intellectual disabilities. The causes of neurodevelopmental disorders are multifactorial, but the connection to exposures to heavy metals, particularly methyl mercury, is known.¹³

FIGURE 3

Connection between anthropogenic sulfate release and human mercury exposure

Release of sulfate into the environment from anthropogenic source (example: acid mine drainage)

Sulfate reaches wetlands where it can stimulate certain "sulfate-breathing" microorganisms that are capable of converting inorganic mercury to methyl mercury.

Enhanced rates of mercury methylation can occur.

Methylmercury bioaccumulates in aquatic ecosystems, including fish.

Humans consume mercury-contaminated fish.

These conditions cannot be cured, and they come with significant personal, familial and societal costs. A small increase in incidence resulting from increased mercury exposure may result in large costs to society on a population level.¹⁴ A recent consensus statement by Project TENDR issued a strong call for "recommendations to monitor, assess and reduce exposures to neurotoxic chemicals."¹⁵

Air Quality Considerations

The ore complex that contains copper, nickel and precious metals may also contain amphibole fibers. Amphibole fibers are often described as elongated mineral particles (EMPs). EMP fibers are crystals with similarities to asbestos. When ore is mined and processed, EMPs can be released. Currently, EMPs pose an uncertain risk to human health. Because of this uncertainty, longitudinal biomonitoring of people and communities exposed to EMPs is needed.

"Fugitive dust" is a term applied to dust that escapes mining operations. This can include dust that mining trucks generate on the road or dust that escapes as ore is transported in open train cars. Although levels may be difficult to quantify, fugitive dust may have health effects on both mineworkers and residents of nearby communities. Fossil fuel combustion, which is needed to generate electric power for mining, is another source of air pollution, the effects of which need to be considered.

Worker Exposures and Concerns

Safe workplace guidelines are important for people employed in the mining industry. Mine workers require protection from the airborne particulates and dust that are associated with mining operations. Sulfide mining, by virtue of its novel ore composition, presents new environmental safety questions. ➡

The Mine Safety and Health Administration (MSHA) oversees mine safety and releases guidelines for worker protection. MSHA-allowable exposure levels for airborne exposures other than to asbestos are tied to the 1973 American Conference of Governmental Industrial Hygienists (ACGIH) guidelines. The MSHA guidelines do not reflect current science on the health consequences of airborne exposures in mining. The National Institute of Occupational Health and Safety (NIOSH), MSHA and the Occupational Safety and Health Administration (OSHA) have all proposed reduction of the allowable exposure by 50% from the 1973 ACGIH guidelines. In order to better protect Minnesota's miners, the threshold for allowable airborne exposures should be based on more contemporary science. Both NIOSH and ACGIH have published more up-to-date recommendations.^{16,17}

OSHA has published models for medical surveillance of workers exposed to a variety of chemical hazards. Because the Duluth Complex rock includes silicates and other minerals, characterization of the potential adverse chemical and mineral exposures for workers using Duluth Complex-derived rock is important. OSHA provides medical surveillance models for nearly 20 compounds; however, no single overarching medical surveillance recommendation exists for sulfide mining. Given the long latency for the appearance of mining-related health effects, establishment of medical surveillance programs should be considered in the planning of the mine project.

Planning for Unanticipated Events

Proposals for sulfide mining operations must describe how water quality will be preserved, but may not take into account

the extent of extreme weather events. In Minnesota, we are experiencing more significant rain events.¹⁸ In June 2012, for example, the northeastern part of the state received 10 inches of rain in 24 hours. Significant rainfall such as this may result in unintended escape of mining wastewater and accompanying toxins.

A 2015 study of tailings storage facility failures centering on those categorized as "serious" or "very serious" determined that such failures have increased over the last 20 years.¹⁹ For example, in 2014, a British Columbia copper and gold mine tailings pond breach spilled over 6 billion gallons of waste and polluted water into the surrounding lakes and watershed. Such events underscore the need to plan for a catastrophic event involving sulfide mines.

Current regulations also require mining companies to provide plans for the closure of an operation; this involves continued water treatment using filters or reverse osmosis systems. Post-closure water treatment can be necessary for centuries. Equipment malfunctions, natural disasters, extended power outages or inadequate funding can create an unintended interruption in water treatment. It is essential to pre-plan in order to prevent such interruptions from contaminating ground and surface water and the human water supply.

Current Regulation and What is Needed

In 1969, the federal government enacted the National Environmental Policy Act, which directs all federal agencies to take into account the health impacts of all federal actions "significantly affecting the quality of the human environment."²⁰ The Minnesota Environmental Policy Act of 1973 directs "all department and agencies of the state government to ... undertake, contract for or fund such research as is needed in order to determine and clarify effects by known or suspected pollutants which may be detrimental to human health."²¹

With these laws in mind, physicians might assume existing regulations will protect human health. The current mandated evaluations of mining proposals do address air and water quality impacts and toxin discharges. Yet the laws do not require a comprehensive, long-range examination of potential effects on health. For example, environmental reviews may scientifically model the amount of mercury that may be released into surface and ground water, but they do not answer questions about the potential effects on human health of that mercury as it accumulates in food sources.

The short- and long-term effects on human health should be considered in present and future sulfide mining proposals. Both the EPA's Health Risk Assessment (HRA) and Health Impact Assessment (HIA) can be used for this kind of evaluation. The HRA estimates the nature and probability of adverse health effects in humans who may be exposed to chemicals in contaminated environments now and in the future.²² The HIA focuses on "health consequences of decisions upstream from health"²³ and can be defined as "a systematic process that uses an array of data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program or project on the health of a population and the distribution of those effects within the population." The HIA provides recommendations on monitoring and managing those effects.²⁴ Incorporating an HRA and an HIA into the environmental review for a proposed sulfide mining project could enable a more informed, integrated and meaningful discussion of human health concerns.

Conclusion

Sulfide ore mining presents a significant departure from the traditional iron ore mining done in Minnesota. Because of our state's water-rich environment and

the chemical composition of sulfide ore, proposed sulfide mining raises concern about potential deleterious effects on human health. Physicians must continue to educate themselves about the evolving interplay of mining operations and the health of the communities in which they practice. **MM**

Emily Onello and Jennifer Pearson are family physicians in Duluth. Deb Allert is a family physician in Two Harbors. Steve Bauer is a child and adolescent psychiatrist who practices in northeastern Minnesota. Margaret Saracino is a child and adolescent psychiatrist in Duluth. Kris Wegerson and John Ipsen are family physicians who practiced medicine in Duluth for more than 20 years and now practice in Odanah, Wisconsin. Douglas Wendland is an occupational medicine and family physician in Duluth.

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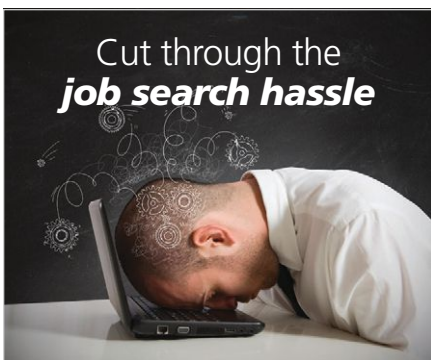
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Assume the vocabulary

BY LILY CHAN

Day one:

This is what we have set out to do,
To assume the vocabulary.

Bolded and underlined, asterisked on occasion:

It is no longer “the bottom,” but rather, “the inferior aspect.”

It is no longer “coughing up blood,” but rather, “hemopytsis.”

Multi-colored pen ink, highlighter, *remember!*

We shed, we strive.

Week five:

I practice, tenuously:

“Do you have a family history of hypertension?”

“What?”

Retreat, retreat.

“What I mean is high blood pressure.”

Week nine:

Auto-correct has picked up on this.

My phone started accepting words like “dehydrogenase”
somewhere in my sophomore year of college;

That has since leveled up to “kwashiorkor” and “granulomatosis.”

Day one hundred fifty-four:

The service, armed with acronyms,
the Morse code of cancer, volleying back and forth
between the CT scans and dictations not yet transcribed
layers of insulation, a fluffed-up brush border, opiated—
Maybe Mrs. K. doesn't have to know.

I try my wobbly hand once more.

Mrs. K is a fifty eight-year-old, very pleasant female from—But wait. A female?

Yes, a female.

A woman? A loving daughter?

A female. XX.

Year three:

These words have trickled in, ossified
between the crevices—gyrae—of my brain
The highway between my eyes, Broca's, Wernicke's, my tongue:
its new-blacktop-scent searing my upper respiratory tract.
These words that help me into my white uniform,
have they also calloused my skin? Chilled my hands?

What I hope: that

Our words for suffering
Do not get erased, assimilated into
Likert scales, *p*-valued symptomatology,
plucked and polished clean, because
Pain has no shorthand.



2016 WRITING CONTEST

HONORABLE MENTION



Lily Chan is in her fourth year at Mayo Medical School.

ABOUT THIS PIECE:

Chan says coming from a non-medical family made her more aware of the challenges the language of medicine can pose. “As I became closer to becoming an MD and further from being a layperson, I felt that medical jargon increasingly muddled communication with my patients. This is a reflection on that.”

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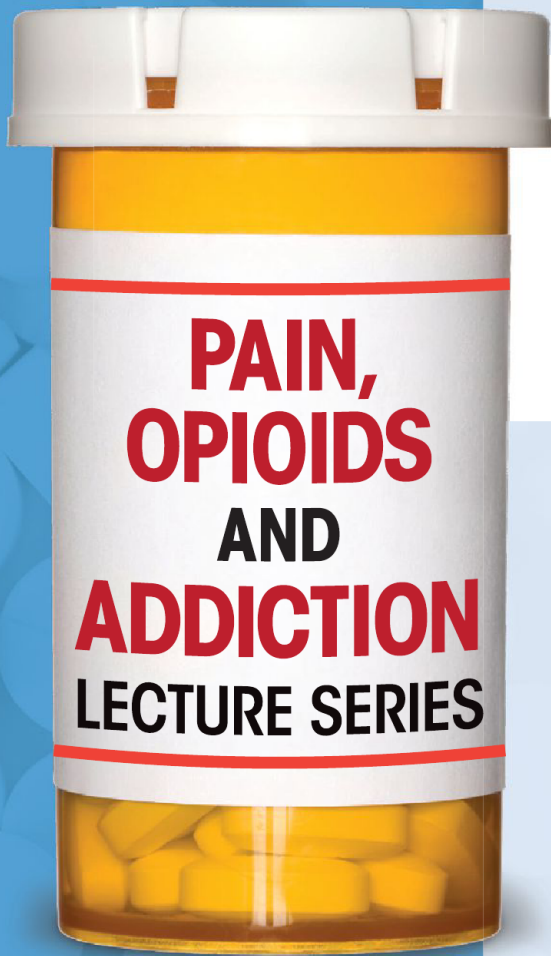
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