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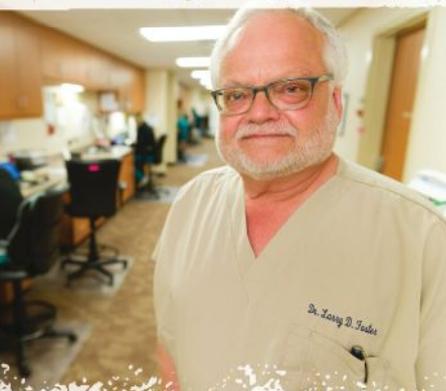
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SOCIAL DETERMINANTS of HEALTH

Beyond the medical history checklist

PAGE 20



ALSO

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You can ask someone who wants to wait for more data whether the unlikely long-term risk of vaccination outweighs the very well-known risks (including long-term risks) of getting or spreading COVID.

Combating fear of the unknown in healthcare worker COVID vaccination

One of the more scary and surprising experiences in my career was in January, when COVID-19 vaccines were becoming available for healthcare workers (HCWs). At that time, some of my colleagues (physicians and others) were saying that they were not going to get the vaccine—or at least not yet.

It turns out that this was not unique to my experience; a recent study in the *Journal of the American Board of Family Medicine* (Parente et al., May, 2021) of about 3,300 HCWs showed about that 30 percent of respondents wanted to delay COVID-19 vaccination and another 10 percent didn't intend to get the vaccine at all.

The *JABFM* study is only one of several in the United States and worldwide showing similar results. While these numbers vary across studies and specific subpopulations, the message is clear: even HCWs have concerns about being vaccinated against COVID-19. Unfortunately, the barriers are numerous and seem to parallel those seen in the general population, including concerns about efficacy, safety, short- and long-term adverse effects, the rapidity of vaccine development, institutional/governmental distrust or preference for immunity created by having had COVID. In short: issues of trust or fears of the unknown. Trust concerns have been addressed widely. Not so the fear of the unknown, yet it appears to be a significant mediator of individual risk/benefit analysis relative to COVID-19.

Since our imaginations can run wild with these unknown fears, we must acknowledge the present limitations of medical science and be comfortable stating when we don't know an answer and when an answer simply doesn't exist. The challenge of these fears versus specific issues of trust is trying to disprove an absence of

data. As an example, some raise concerns about infertility or other reproductive hazards from the vaccines—despite there being no evidence whatsoever supporting these concerns. I respond by explaining that this has not been observed since vaccinating hundreds of millions of people in the United States and 2 billion people worldwide so far—including pregnant women or women who weren't yet pregnant—and healthy kids have been born.

Some say they are afraid of what the long-term risks of vaccination might be. Based on what we know about existing vaccines and how they work, it's most likely that there will be no long-term effects, although we won't know for sure until a lot more time has passed. You can ask someone who wants to wait for more data whether the unlikely long-term risk of vaccination outweighs the very well-known risks (including long-term risks) of getting or spreading COVID.

The divergence of opinion about vaccination among medical professionals suggests that a top-down education approach may be most effective; we know that individual counseling from physicians and prevention efforts in the workplace—both effective with tobacco cessation—yield results.

We have a responsibility to start by educating each other, developing more concise factual information about the vaccines that specifically addresses concerns about the unknown. Then clinicians can share these same messages with their patients. **MM**

Zeke J. McKinney, MD, MHI, MPH, is the chief medical editor of *Minnesota Medicine*.

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A WORKABLE MODEL

Research of the people, by the people, for the people

BY KONNIE LEMAY



PHOTO BY TEKOPHOTOGRAPHY

“With.”

It’s a small word that makes a critical difference when it comes to tailoring healthcare research to Indian Country.

That philosophy of collaboration at the Johns Hopkins Center for American Indian Health attracted two young Native researchers, one in Baltimore and one heading the center’s new Great Lakes Hub in Duluth. They undertake all their projects starting from “with.”

“It’s definitely a value that I have. It’s so important to work with tribal communities as equal partners at all levels of research,” says Victoria O’Keefe, PhD, (Cherokee Nation and Seminole Nation), associate director of the center and a clinical psychologist. “It’s just the way we should be doing research with Native communities.”

Some research within Native communities, she explained, has a fly-by attitude. “It’s helicopter research, they fly in and fly out and don’t have sustainable relationships with community.”

Partnering with local communities for research leading to health solutions has been a cornerstone of the center since a Johns Hopkins physician first traveled to

“It’s so important to work with tribal communities as equal partners at all levels of research. It’s just the way we should be doing research with Native communities.”

Victoria O’Keefe, PhD, associate director of the Center for American Indian Health and a clinical psychologist, is also a jingle dress dancer. “It’s a healing dance,” she says, “and I think it goes hand-in-hand with the work that I do.”

the White Mountain Apache Tribe in 1980 to stop an outbreak of diarrheal disease in babies. The center officially opened in 1991, working with behavioral and mental health and infectious diseases. Its mission continues to create partnerships to “improve the health status, self-sufficiency and health leadership of Native people.” In addition to Baltimore and Duluth, the center has nine offices in Arizona and New Mexico, including on Navajo Nation and White Mountain Apache lands, and supports public health interventions in more than 140 tribal communities in more than 20 states.

During the current pandemic, the center has posted Native-specific emergency response materials. O’Keefe recently received a grant with her colleague, Emily Haroz, PhD, from the Johns Hopkins Alliance for a Healthier World, to generate a Native children’s storybook to help families cope with the mental health effects and provide hope in the face of COVID-19.

A cultural adaptation of *My Hero Is You*, the book shows the “with you” attitude, developed with diverse experts in child development, public health and mental health from numerous tribes. Youth artist Joelle Joyner (Meherrin/Cherokee Nation/Blackfeet) created the illustrations for *Our Smallest Warriors, Our Strongest Medicine, Overcoming COVID-19*, available for free online, along with parent resources and children’s coloring pages and activities. More than 42,000 print copies have also been distributed to 105 tribes in the United States and 10 First Nations communities in Canada.

O’Keefe’s primary research focuses on culturally driven youth suicide prevention interventions. In May 2020, O’Keefe was named the first Mathuram Santosham Endowed Chair in Native American Health at Johns Hopkins Bloomberg School of Public Health.

“There are not many centers that focus on American Indian and Alaska Native health exclusively (and work) with tribal communities,” says O’Keefe of the Center for American Indian Health, where she has worked for nearly four years. “It was an amazing opportunity ... Suicide is an issue that my family has experienced. That’s initially what drew me to this area.”

O’Keefe admires the teachings about health and strength from her family, including her late grandmother, who was a community health representative and fluent speaker of Cherokee.

“I can speak personally that I learn a lot from the women in my family. I’ve been raised to be very proud and with a lot of strength from my mother as well as my late grandmother.”

Suicide rates for American Indians and Alaska Natives are nearly four times higher than ethnic groups with the lowest rates, according to the Centers for Disease Control and Prevention, and suicide is the second leading cause of death for Native people ages 10 to 34. The concern transcends individual communities, but there is not a one-size-fits-all solution, O’Keefe notes.

“Do we need to adapt certain treatments or do we need to come up with brand-new treatments that are specific to our communities?” she says. “There are 574 federally recognized tribes. Every community is different, every community has different



“We shifted our orientation to say, ‘We’re not in the driver’s seat. We’re on the team, and we have a voice on the team, but the drivers should be the community members.’”

— Melissa Walls, PhD, is director of the newly created Great Lakes Hub of the Johns Hopkins Center for American Indian Health.

priorities. Sweeping generalizations are hard when you’re working with tribal communities. What is the best route to healthy communities? I want to put in place (strategies) to reverse what we are seeing, communities where suicide is not an issue.”

O’Keefe did a TED Talk in Oklahoma on that topic, and she was later inspired by a talk in which Melissa Walls, PhD (Bois Forte Ojibwe and Couchiching First Nation Anishinaabe) spoke about the strengths in Native communities and the importance of such strengths-based narratives, saying, as O’Keefe remembers, “People talk about Native communities as vulnerable populations. We’re not vulnerable populations, we’re priority populations.”

In 2019, Walls joined the Johns Hopkins Center for American Indian Health as director of its Great Lakes Hub. She, like O’Keefe, was attracted to the Community Based Participatory Research, or CBPR, model central to the work and mission of the center. She, too, saw how research could ignore the needs of Native communities, even when “advisory boards” were part of the process.

“Are we authentically engaging in partnership or are we just forming an advisory board and saying it’s a partnership?” Walls

says the question for research organizations should be. “The philosophy behind it is all about power. Historically, it was people in academic institutions, often in a white coat, often a white man, who were running studies, doing science and doing it to publish. It creates a power imbalance, where there’s the researcher and the researched. We shifted our orientation to say, ‘We’re not in the driver’s seat. We’re on the team, and we have a voice on the team, but the drivers should be the community members. We don’t even call them advisory boards anymore; we call them community research councils because ‘advise’ means ‘just advise.’ The power of language matters.”

Walls says the flower symbol so prevalent in Ojibwe artwork, and part of the Great Lakes Hub logo, is the metaphor for how research should be done. The center of the flower is the participants in any study.

“They’re giving their life story,” she says. “That’s a huge offering. They’re the center, and then tribal leaders and then community research council members who might include (study) participants but might be elders or community service providers. And then us, the university-based staff, we’re just petals. We’re facilitators of the process and writers of the grants. We have a responsibility to get the findings out there, but we would be nothing without the center. When I start to get uneasy is when we forget about the center of the flower.”

Walls knew early where the center of her life should be. After earning a doctorate in sociology, she wanted the chance to give back to her family, her home community and the broader Ojibwe nation. She also wanted to return home ... or at least to Duluth, 130 miles from home.

“The issue is, you get a PhD and you want to do research, but where can you go in northern Minnesota? Duluth was the closest thing. My mom, my dad and my grandma ... everybody lives within two hours of Duluth.”

She got a job at the University of Minnesota Duluth and hurried to finish her doctorate. She soon found herself working with leaders at Bois Forte. In 2011, she was working with collaborators at Bois Forte and Lac Courte Oreilles, writing a grant about diabetes. To find the right focus for diabetes research specific to community needs, Walls queried frontline workers. Doris Isham, a diabetes nurse at Bois Forte, described “an apathy” among her diabetes patients.

“She was describing depression in her patients,” Walls says. “I’d studied mental health, so I said, ‘Let’s write a grant about mental health and diabetes’—and we got it.”

The prestigious grant from the National Institutes of Health caught the attention of the University of Minnesota’s School of Medicine, which recruited Walls. “The school of medicine up here, just like anywhere, has a heavier emphasis on research, so it



Johns Hopkins Center for American Indian Health

was a nice fit. Also, our branch of the medical school in Duluth is focused on American Indian and rural healthcare.”

Under that two-year grant, Walls says, “We learned a lot and published quite a few articles about how mental health can be a killer when you have any disease, but Type 2 diabetes, in this case. What we realized was what preceded the mental health issues. It was stress and trauma, so we wrote another grant for stress problems and Type 2 diabetes.”

She was awarded a five-year grant to continue research and found herself recruited again, this time by Johns Hopkins. In 2019, she got a third grant to apply the results of the research and also began as director of the Great Lakes Hub, which opened that month. In 2020, she was appointed Bloomberg Associate Professor of American Health in Obesity and the Food System—an endowed position at the center supported by the Bloomberg American Health Initiative.

Walls works with a team of over 100, including dozens of community-based Native research associates, on projects focused on diabetes, substance use and mental and physical health.

Putting their research about depression and diabetes into action will complete the circle. “We’ve got so much information from five communities, and so now we need to fulfill our promise to not just take data and walk away,” Walls says. “We are starting a five-site intervention with a clinic trial. All participants will get the intervention eventually. We’re taking all of those findings and synthesizing them into a curriculum that our colleagues at the Baltimore center had already developed with the White Mountain Apache community. We are adapting it for Ojibwe context and adding a stress and trauma piece to it. It’s a family-based intervention.”

The intervention program was to be rolled out in the summer of 2020 but, due to COVID, the rollout has been delayed, though, Walls noted, “We are taking the time to do virtual piloting of the session and really using this ‘extra’ timeline to feel awesome about the curriculum. Our community meetings have shifted to phone and Zoom, but we’re rolling with it.”

Walls knew that taking a position with Johns Hopkins would enhance her grant-seeking abilities, but she was also delighted by the reception for keeping her work in Duluth.

“There’s something very powerful about the fact that I was able to take this position full-time with Johns Hopkins Bloomberg

School of Public Health, the No. 1 school of public health, and it's in Baltimore, but they let me live here. I didn't really even have to describe the rationale for that. The vision was, 'Why would you take somebody away from the communities they collaborate with?'

"That's just (academic) silo-ing, and personally it would have been really difficult from the relationships we've built up with people in these communities. One of the issues with Indigenous scholars over all is that we want to stay home and do our work at home."

O'Keefe notes the center's commitment not just to Native research but to training Native scholars as public health leaders. "Part of the mission is to train the next generation of Native health scholars and Native health researchers," she says, pointing to more than 2,600 scholarships from Johns Hopkins "across the academic pathway—high school completion, undergraduate, graduate and active faculty development—looking across that whole academic pathway, that's really a goal of ours."

Walls is pleased in the response of participants in a more than one-decade-old research project, started with 10-year-olds to track their mental health. Now in their 20s, the "researched" are helping to revise the research.

"In the beginning, those 10-year-olds were not saying, 'Study my mental health,'" Walls says. "But now we ask them, 'Tell us what this has been like for you. What else do you want to know?'"

For more information

Johns Hopkins Center for American Indian Health <https://caih.jhu.edu>

Great Lakes Hub <https://caih.jhu.edu/locations/great-lakes-hub>

Johns Hopkins Bloomberg School of Public Health <https://www.jhsph.edu>

Children's book *Our Smallest Warriors, Our Strongest Medicine* <https://caih.jhu.edu/programs/strongmedicine> and <https://caih.jhu.edu/programs/oswosm-honoring-our-teachings>

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"What they're telling us now," Walls says, "is that they want us to involve their own children. If you are putting your own children forward, I think you've had a pretty good (experience). It's shockingly positive. And it's not me, it's our interviewers. It's our community members out there doing it." MM

Konnie LeMay is editor of *Lake Superior Magazine*.



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WHEN ILLNESS—
OR WORK—
IS OVERWHELMING

Find ways to calm your limbic system

BY LINDA PICONE



“I remember feeling so overwhelmed and frustrated ... There was so much change going on, none of which I was in control of. Feeling joyful and purposeful were two things I thought I would never feel again.”

Sound familiar?

Amy Stenehjem, MD, is not talking about the pressures of medical practice in the 21st century; she’s talking about her experience with chronic illness, which for six years meant she could barely leave her bed and, in 2011, caused her to stop working as a physical medicine and rehabilitation physician—a career she had hoped for and worked for since she was in fifth grade.

Stenehjem is in a unique position to see the similarities between suffering from serious illness and the frustrations and pressure of being a physician, because she’s experienced both.

“Physicians are involved in so many tasks, so many things that have to be done that day. You really have to be on your toes and that keeps the adrenaline going. You learn how to live with that stress level, and eventually you burn out,” she says. “It’s the same thing with chronic illness. Feeling sick is a 24/7 deal. It’s not something you can take breaks from.”

Although the two kinds of stress are different, she says, “Really, the limbic system can’t tell the difference. It just knows that we think we need to be on our toes or worried or hyper-focused.

When the limbic system is on high alert, our brain puts the needs of the limbic system ahead of other brain functions, such as problem-solving and the creating of memory. Feeling happy or content is unlikely to happen when the limbic system is active.”

Stenehjem was diagnosed with several autoimmune diseases, starting in her teens. Her symptoms of fatigue and joint pain were manageable so she was able to finish undergraduate, medical school and residency training but in 2009, she started experiencing a number of painful and debilitating symptoms including high fevers, shortness of breath and fatigue. She was virtually bedbound for years and had to stop working as a physician. She turned to both traditional and integrative medicine to find ways to manage her symptoms and was able to resume a more active life—although not practicing medicine as she once had.

She decided that she had to figure out how to find joy in her “new normal,” a life that initially felt “void of purpose and happiness,” she says. “I decided to solve this problem as I had with any previous problem, by researching the heck out of it,” she says. “I immersed myself in the concept of joy, reading articles by those who had overcome seemingly insurmountable circumstances, and studied the science of joy. In time, I learned how

to create joy in my life, despite my daily health challenges.”

Stenehjem uses four key tools to get the body out of “limbic overdrive”:

Breathing. “Learn how to breathe—to really breathe, to use your diaphragm and to fully expand the lungs. It takes more time to execute a full breath and therefore the breathing rate slows down. The process of slowing down the breathing rate in itself is a way to reset the limbic system. The limbic system involves a feedback loop—if you feel you are in a flight or fight moment, your body will react by increasing your heartrate and breathing rate which tells the limbic system that it indeed is supposed to be on high alert. But if you break that cycle by slowing down the breathing rate (which will also likely slow down the heartrate) the limbic system receives input from you telling it that you are not in a moment of flight or flight and that it does not need to be active.”

Creating positive emotions. “By finding something to appreciate in that moment such as looking for something to be grateful for or conjuring up curiosity — you automatically create a positive feeling. The more you make yourself feel gratitude or curiosity, the stronger these areas of the brain become, making the limbic system less likely to overreact. The more you make yourself feel gratitude or curiosity, the more likely you are to actually begin to truly feel these positive emotions.”



Amy Stenehjem, MD

Meditation and yoga. “These two tools can help teach your brain to rely less on the limbic system. They can also teach you little tricks that you can use to ‘reset’ the limbic system during stressful moments. I use meditation quite a bit. When I wake up, I do a form of meditation right away in the morning. I’ve found the meditation app Headspace to be helpful; it’s great for beginners and teaches the basics.”

Self-compassion. “When you give yourself a break, when you stop being so hard on yourself and stop expecting to have all the answers, you also break the limbic feedback loop. The more you teach yourself that you are not an island and that it is okay to ask for help and to ask for what you need, the more your brain will learn to realize that you have the resources available to you that are needed to address any situation with success.”

None of this was simple for Stenehjem at first, and some days take more effort than others, even now. “I really had to work at finding things to appreciate,” she says of the days when her illness made it impossible for her to do much. She learned to list—and appreciate—the things she could do, even if they were small. “I was able to get out of bed. I brushed my teeth today. I managed my medications. You have to change how you view what is an accomplishment and what it means to be purposeful. In my new normal, there could be great accomplishment even in small tasks.”

In 2018, Stenehjem started a consulting practice, Mastering Health & Happiness, from her home in Brooklyn Park. She helps people with medical issues better understand and navigate their symptoms, diagnoses and healthcare systems (but she does not diagnose or treat them)—and she helps them find ways to experience joy in their lives, despite their illness.

The lessons she learned for herself, and that she now shares with her consulting clients, can help physicians who feel burned out on the practice of medicine—likely a career they were once excited to have. “How do you help yourself look at the practice of medicine like you did when you were first in medical school?” she asks. “How do you

“How do you appreciate the opportunity you have to be someone a patient will wait for months to see, the opportunity to provide them services that will improve their lives?”

– Amy Stenehjem, MD

appreciate the opportunity you have to be someone a patient will wait for months to see, the opportunity to provide them services that will improve their lives?”

“I think it is possible to reclaim that joy,” Stenehjem says. “It just takes some work to teach the brain how to appropriately react to stressful situations. This brain retraining can not only help you find joy at work, but can also help you find joy in other areas of your life, no matter what your external circumstances.”

Stenehjem says she wishes she understood what she knows now about creating a joyful life when she was practicing medicine. “I often let the busy-ness of the day affect my mood, resulting in a less-than-appreciative state of mind during the workday,” she says. “I realize that I now have a deeper understanding of the concept of joy and wish I could go back in time and teach the younger me what I’ve now learned.” **MM**

Linda Picone is editor of *Minnesota Medicine*.

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COVID-19 vaccination and healthcare employees

Should vaccination be a condition of employment?

In healthcare, every organization from independent clinics to hospitals to health insurance companies wants its employees to be vaccinated against COVID-19 for a number of reasons, starting with protecting both employees and patients and including setting a good example for the general population. Healthcare employers may go beyond encouraging their employees to offering incentives—financial or otherwise. Some employers are requiring vaccination as a condition of employment and others are considering it. Such action raises legal and ethical concerns for employers, especially with diminishing vaccination rates.

Without addressing the legal implications of such action, is mandating a COVID-19 vaccine by a healthcare employer as a condition of employment ethical?

YES

We need to protect patients and each other

The decision to mandate vaccinations in the workplace is complex and requires a nuanced discussion of the benefits and risk for employees. However, the decision to mandate vaccinations in the healthcare workplace is one that is supported by many years of mandated childhood and influenza vaccinations in order to participate in care. The difference? Healthcare centers and systems have not only their employees and their workforce to protect, they also have an obligation to protect the patients they serve.

Increased COVID-19 vaccinations have been associated with lower absentee rates for employees, including low rates of employee illness. More employee availability allows for adequate staffing, even with potential future COVID-19 case spikes that require increased staff for acute clinical care. In addition, health systems already challenged financially with the aftermath of the pandemic will not be further burdened with the costs of excessive preventable employee illness leave and the possible need to obtain temporary assistance through more costly locum or per-diem clinical services, which can be difficult to obtain in the current healthcare crisis.

As always, medical and religious exemptions will exist, although employees who choose not to be vaccinated may be required make accommodations, such as universal wearing of mask and eye shield and social distancing, including during work breaks.

As physicians and other healthcare professionals, we have an obligation to “first do no harm” and focus on limiting virus spread to patients. Given the risk of asymptomatic spread and the lifting of mask mandates, even in some non-patient-facing areas of clinics and hospitals, there remains significant risk of spread from a healthcare team member to a patient, unless universal use of N95 respirators and eye protection are utilized for unvaccinated patients and staff. In order to keep our patients safe, we must make every effort to minimize the risk of them contracting COVID-19 while being cared for due to other conditions. One can only imagine the risk this might pose to the patient, who may already be hospitalized for health-threatening concerns.

From a public health perspective, mandating COVID-19 vaccination in healthcare systems will also slow the spread of the virus and will allow our communities to move closer to herd immunity, ultimately moving towards a goal of a return to more “normalcy” in our daily lives.

Cresta Jones, MD, FACOG, FASAM, is associate professor, Maternal Fetal Medicine, University of Minnesota Medical School. She also chairs the MMA Public Health Committee.

NO

Mandatory policies increase distrust and may negatively impact vaccinated employees

The COVID vaccine is one of the best ways to prevent infection and spread of COVID-19. As more data has become available on the safety and efficacy of the vaccine, and as vaccine availability has increased, healthcare employers have needed to consider the implications of various forms of mandated vaccination for their employees. In addition to a true mandatory vaccine policy, in which unvaccinated healthcare workers would be ineligible for employment, there are other “pseudo-mandatory” policies that would discourage refusing the vaccine, including sending unvaccinated employees to alternative assignments or policies that allow only vaccinated employees to go without a mask.

The COVID-19 pandemic has put immense strain on the healthcare system. Hospitals, long-term care facilities, nursing homes and other facilities have been overburdened and under-resourced. Mandatory vaccination, or other pseudo-mandatory vaccination strategies, risks increasing the load and strain on the frontline workers who adhere to the policy to get vaccinated. When hospitals mandate vaccination, a portion of the workforce may choose to leave instead of getting vaccinated. Employers may shift unvaccinated employees to alternative non-patient-facing work. In both cases, the burden is shifted to vaccinated employees who remain, which could increase burnout and ultimately harm patients.

Mandating vaccination should not be implemented as a substitute for other policies that protect healthcare workers and patients. The pandemic has perpetuated a breakdown of trust between employers and employees due to lack of PPE and consistent self-sacrifice due to significant uncertainty and fear. Requiring that employees get vaccinated risks further alienating employees who already do not feel that their employer has their best interests at heart. While the vaccine has been shown to be effective and acceptably safe in the short term, we do not know the long-term risks of vaccination. Hospitals must provide adequate protective policies with the fewest negative consequences before putting additional requirements on their staff, especially when those requirements have inherent personal risk.

Vaccination is one of the best tools we have to slow the spread of COVID and progress towards a more normal, post-pandemic society. However, mandating that healthcare workers get vaccinated should be a last resort and only undertaken if vaccination rates are sufficiently low despite education, availability and encouragement to get vaccinated. **MM**

Maraika Robinson, MD, is a resident in Rochester. She is the MMA Residents and Fellows Section Ethics and Legal Affairs committee representative.



LEARNING TO PARENT

Chart notes on family matters

BY IRIS WAGMAN BOROWSKY, MD, PHD

I sit in a wheel chair at the hospital entrance waiting for my husband to come around with the car. In my arms is our precious newborn baby. In my final year of pediatric residency, I am expected to know something about newborns and the children and adolescents they grow into. But at this moment, the only thing I can think is: Are they actually going to let us take her home with us?

Our daughter was born by crash C-section. Her eyes rimmed in green from meconium, she was the most beautiful baby I had ever seen. From my hospital bed over the next 48 hours, I played the role I knew so well—that of resident communicating with my team. In this case, the team was my husband and the communication was barked orders to go check on our daughter—oxygen level, weight, skin color, facial expression—and report back. He dutifully obliged.

Once home, chaos reigned as the breastfeeding I counseled parents on as the very best way to feed their babies was not working for us, no matter how hard I tried. The lactation specialist we visited had me bend my recently pregnant body into various unnatural twists and poses as she shoved my breast into our baby’s mouth. As I practically stood on my head, she labeled our child as “willful,” correctly identifying one of her attributes at five days of age. The visit ended with her sage advice to take some deep breaths, even drink a glass of wine to unwind. Exhausted in bed at home, I tried breastfeeding while lying down, a position that, curiously, no one had yet suggested. It worked. Stunned, fearing it was a fluke, I only breastfed lying down for the next month. Or maybe I was grateful for the chance to lie in bed every two hours.

CHIEF COMPLAINT: Parents with no formal training for the job.

On our refrigerator is a magnet titled, “101 ways to praise your child.” Words like “Wow,” “Way to go,” “You’re special,” “I knew you could do it,” “Fantastic,” “I love you,” fill the magnet, along with 95 other equally loving affirmations. Once in a while, during a particularly rough piano-practicing session, my daughters would run to the refrigerator and bring the magnet to me. Pointing to the words I should say, they helped me out: “Dynamite,” “You mean the world to me.”

Playing piano teacher and mom was a terrible idea, we finally decided.

HISTORY OF PRESENT ILLNESS: 8-year-old girl reports pretty good parenting with memorable bumps in the road for a duration of all her life. Parenting transgressions include being too firm (piano-practicing sessions are a prime trigger) and being not firm enough (patient scribbled in her baby book at age 3, writing her “name” throughout the pages of this treasured memento of her childhood at a time when her “letters” were in fact large imposing scribbles). Stress at work and too little time in the day make things worse; family dinners and doing most anything together—playing, reading, snuggling—make everything better. Patient has no particular concerns, but wonders where grownups go to school to learn how to raise children.

I argue the scribbles add to the priceless memories, but pushing 30, she still hasn’t forgiven me for letting her scribble in her baby book. The scribbles are an indelible illustration of my parenting missteps over the years. To be sure, being a pediatrician

does not diminish the need for parenting school.

PAST MEDICAL HISTORY:

No hospitalizations or surgeries.

MEDICATIONS: None.

ALLERGIES: None Known

SOCIAL HISTORY: Lives with mom, dad, and 5-year-old sister. Attends 2nd grade.

Children are sponges. Invariably, they will share what they learn from you with teachers, friends, neighbors, and strangers. Your words will reverberate—be careful what you say.

Your child's second-grade teacher hesitates, then awkwardly divulges that your child excitedly told her she wants to be a "butt licker" when she grows up.

You don't miss a beat and correct her: "No, no, no; she wants to be a butt looker-inner," you say.

The teacher later clarifies with your child that indeed she misheard; not butt licker (gasp), but butt looker-inner. Whew, what a relief. Much better.

Her dad has no idea where this came from, but you know right away. This was how he referred to a colleague who is a gastroenterologist.

An absorbent child sponge.

Your neighbor runs over and sheepishly informs you that your child (different one, not the budding butt looker-inner) inexplicably declared, "What is it with men and erections?"

Her children are now inquiring, "What are erections?"

At once you are mortified and hysterical. These are parroted words, however confused. Several weeks ago, your family was lost on the way to an event (pre-GPS). Behind the wheel, your father-in-law was not persuaded by your mother-in-law's suggestion to stop and ask for directions.

You and your mother-in-law exchanged knowing glances. "What is it with men and directions?"

Sponges, absorbent child sponges.

PHYSICAL EXAM: WDOWN girl in NAD, alert, smiling, talkative, + parent/child hugging. Parents use encouraging words with children in office ("Nice work," "Well done").

We are forever on view; role models, with or without intention. We matter to our children; our parenting matters. Arguably the weightiest work we do, our parenting role arrives with a bang, devoid of formal orientation or training. On-the-job training is spottily available, variably accessible and warily accepted. The research is clear: Parenting School is beneficial. Across cultures and economic circumstances, parenting education boosts parents' empowerment and competence, mental health and well-being and social connections. It increases positive parenting practices and the use of alternatives to physical punishment, and it reduces behavioral problems, substance use and violent behavior among children and teens. A recent study demonstrated the effectiveness of family-centered interventions in preventing depression and anxiety symptoms among Black adolescents who frequently experienced racial discrimination; further, these reductions in mental health problems were completely mediated by intervention-induced increases in protective caregiving practices of providing emotional support, involvement and quality communication.

We know parenting education at all stages of our children's development is worthwhile; it makes us better parents, yet we don't embrace it as our community standard. The result is branding of parent training as something some parents do when they are struggling, rather than something we all do to be better, happier caregivers.

ASSESSMENT: 8-year-old girl has identified a wise question about learning to parent.

PLAN:

- Equip all families with evidence-based, culturally mindful parenting tools and education.
- Transform community norms to embrace community-centered continuing parenting education (CPE) as standard and welcomed by all parents throughout the development of their children.
- Create a companion maquet titled "101 ways to praise your parent" with words like "You're a great role model," "Way to say no when you need to," "Hurray for focusing on dos instead of don'ts," "Terrific job asking for the help you need," "You rock," "I love you," along with 95 other equally loving affirmations. Because we never stop needing loving affirmations. **MM**

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Imposter Syndrome

BY JAMEE SCHOEPHOERSTER

slowly, I'm learning to quiet the voice
that tells me I don't belong here,
that what I have isn't enough
didn't do enough
didn't know enough,
didn't care enough
took up too much space
maybe overwhelmed, overstepped, overcrowded
when I shared, when I asked for help
maybe I should've known better,
knew better, be better

slowly, I'm learning I no longer need to
shed these layers I've grown into
apologize for my existence,
lack of knowledge,
justifying my perseverance

slowly, I accept, confess, acknowledge
my anxieties I'm primed to overthrow them
distance growing between
the thoughts and me
ceasing cynicism,
curbing burnout,
creating space
for the way my mind meanders
loiters, processes, absorbs and creates.

Jamee Schoephoerster is a third-year student at the
University of Minnesota School of Medicine.





PHYSICIAN ASSISTANTS

Since 1965, these medical professionals have been essential to providing care

BY VICTORIA LOUWAGIE, MSPAS, PA-C; OMAR MOUSA, MBBS, MD; AND BECKY NESS, PA-C

In 1965, Duke University established the first physician assistant program with a curriculum based on education and training that had been used to fast-track physicians during World War II. The program enlisted four ex-Navy corpsmen who had received considerable medical training during their military service.

Tom Godkins was hired by Mayo Clinic in 1969 as its first physician assistant (PA) in Minnesota. Godkins was a former medical corpsman in the U.S. Navy, a 1969 graduate of the Duke University Physician Assistant Program and the first formally trained PA in Minnesota. His post-Duke training was provided at Mayo Clinic. Godkins assisted G.W. Daugherty, MD,

in clinical practice in the Department of Internal Medicine and Cardiology. He took clinical histories, performed physical examinations, constructed tentative diagnoses and ordered necessary diagnostics under supervision but, at that time, state regulations did not allow PAs to write prescriptions. Daugherty said that one of the most important contributions a PA provided physicians was “time.” With the PA’s support, the physician’s time could be directed to maximum patient care. PAs were well-received by Mayo Clinic patients; Daugherty said, “a 100 percent favorable acceptance.”

Over the next 50 years, Mayo Clinic and other institutions nationally embraced

the model of care afforded by the PA-physician team and PAs became widely employed in healthcare.

By April 1980, Mayo Clinic employed nine formally-trained PAs who provided direct patient care in the surgical departments of Orthopedics, Urology and Otorhinolaryngology. From the mid-1980s through the early 2000s was a period of enterprise expansion and significant growth in facilities with major capital investment. Mayo Clinic established a campus in Florida in 1986 and a campus in Arizona in 1987. As part of the foundations of the new campuses, PAs were integrated deeply into patient care.

Mayo Clinic Rochester PAs made contributions to improving and advancing PA practice across Minnesota during this time. Robert “Bob” Adams, a Mayo Clinic PA, was one of the inaugural members of the PA Advisory Council, which worked closely with the Minnesota Board of Medical Practice providing state oversight and disciplinary action to PAs in the state. Another Mayo Clinic PA, Carroll Poppen, was the Minnesota Academy of Physician Assistants (MAPA) chapter president in 1980 and in 1995.

By the 1990s, Mayo Clinic had expanded operations across Minnesota, Wisconsin and Iowa to establish the Mayo Clinic Health System (MCHS). This expansion incorporated additional PAs to provide rural Midwest care. The heart of PA education is primary care; the use of PAs in more rural settings helped meet the needs of patients in those communities.

In the 21st century, PA utilization continued to grow and evolve as the profession itself moved into what is now a more recognizable modern PA practice. Modern day PAs are licensed medical professionals, with medical-model, graduate-level education. A growing number of these professionals also have earned doctorates or completed further advanced clinical training in medical or surgical specialties. These modern clinicians provide direct patient care; they diagnose illness, develop and manage treatment plans, prescribe medications and counsel patients on best health practices.

Mayo Clinic and MCHS PAs remained active in advancing state legislation that reflected the formal PA educational advances and thus increasing scope of clinical practice within a physician-led team. Mayo Clinic and MCHS PAs continued to hold elected appointments within MAPA from 2000 to present day. Michael Halasy, DMSc, MPAS, PA-C, was a member of the Mayo Clinic Health Policy Center, which was influential in shaping parts of the Affordable Care Act. In 2003 and 2012, due to changes from the Accreditation Council for Graduate Medical Education that reduced of resident work hours, Mayo Clinic saw that it could use PAs on healthcare teams to fill the resulting workforce shortages.

By 2020, there were more than 700 PAs employed by Mayo Clinic and MCHS. These PAs continue to meet the current and evolving future needs of patients within a complex healthcare system. The Clinic's and MCHS's modern day PAs provide expertise in more than 40 areas of medical and surgical practice spanning both ambulatory and inpatient service lines.

Education

The first PA program at Duke University conferred a certificate to its graduates. Over the years, PA education became more robust, transitioning from a certificate program to a Bachelor's of Science degree. As the needs of the patient became more complex, certified and accredited PA education continued to advance; all modern PA programs in the United States now confer a Master of Science degree upon graduation. Formal PA clinical education includes studies comparable to the first years of medical school, followed by a minimum of 2,000 hours of direct patient care clinical training programs. Clinical rotations are in both medical and surgical disciplines, including family practice, internal medicine, obstetrics and gynecology, pediatrics, general surgery, emergency medicine and psychiatry.

Since the mid-1990s Mayo Clinic has had affiliations with many accredited PA programs and their respective institutions

in providing clinical education experiences with Mayo Clinic preceptors. Mayo Clinic School of Health Sciences is a member of the quad-partnership with the University of Wisconsin-La Crosse Physician Assistant Program. Students enrolled in the University of Wisconsin-La Crosse PA master's program complete clinical rotations at Mayo Clinic and other practice sites as part of their clinical training.

Effective team-based care requires PAs to enhance physician-led care by using skills in communication and integration of all contributors to the interprofessional team, ensuring that the needs of the patient come first. With this in mind, Mayo Clinic School of Health Sciences designed The Physician Assistant Program at Mayo Clinic. The PA Program faculty are led by Michael Huckabee, PhD, MPAS, PA-C.

Huckabee holds the highest rank of the Mayo Clinic's Academy of Educational Excellence, Legacy Level.

Mayo Clinic also leads the nation with 13 advanced PA fellowships.

Research

The National PA Research Agenda created by American Academy of Physician Assistants (AAPA), Physician Assistant Education Association (PAEA), Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC-PA) and National Commission on Certification of Physician Assistants (NCCPA), urged research on the topics of the PA professional impact and value, PA workforce, PA role and practice and PA education. Several Mayo Clinic PAs are authors of reviews and book chapters covering a wide

Mayo Clinic physician assistant fellowship programs and locations

Mayo Clinic Minnesota

- Nurse practitioner or physician assistant emergency medicine fellowship
- Nurse practitioner or physician assistant critical care fellowship
- Nurse practitioner or physician assistant hematology/medical oncology fellowship
- Physician assistant urology fellowship

Mayo Clinic Arizona

- Nurse practitioner or physician assistant abdominal organ-transplant fellowship
- Physician assistant advanced heart failure and heart transplant fellowships
- Nurse practitioner or physician assistant hospice and palliative medicine fellowship
- Nurse practitioner or physician assistant hospital internal medicine fellowship
- Physician assistant neurosurgery fellowship
- Physician assistant otolaryngology fellowship

Mayo Clinic Florida

- Nurse practitioner or physician assistant cardiovascular disease fellowship
- Nurse practitioner or physician assistant critical care fellowship

range of topics such as, but not limited to, clinical leadership and clinical practice. Mayo Clinic PA authors are internationally recognized for their scholarly contributions.

Clinical Practice

Mayo Clinic’s Connected Care Delivery Platform allows for national and international reach. Connected Care links Mayo Clinic’s integrated knowledge and expertise, delivering healthcare, health guidance and health information to patients anywhere, anytime. PAs are able to provide care face-to-face as well as virtually via remote monitoring, case conferences, scheduled consultations and continued care visits, data exchange and patient portal messaging.

Most PAs at Mayo Clinic and MCHS have primary clinical duties, but an increasing number are serving in formal dual-role positions that bridge the gaps between clinical practice, academia (e.g., faculty, researchers, CME course directors), administration (e.g., advanced practice provider supervisors, advanced practice provider directors) and technology. PAs serve on many committees, workgroups and councils in Arizona, Florida, Rochester and MCHS.

Mayo PA Program

The initial cohort of the Mayo Clinic School of Health Science PA Program began coursework in August 2020. “PAs fit perfectly in Mayo’s model of team-based care, and will advance the patient-centered approach,” says Huckabee.

“By tailoring this curriculum to best fit the next generation of PAs, this program will offer a boldly innovative learning experience second to none,” says Huckabee. “Clinical learning opportunities across the Mayo Clinic Health System offer a remarkable breadth and depth of patient care experiences.”

Through clinical inquiry, Mayo Clinic PA students, along with Mayo Clinic and MCHS PAs, will have opportunities to participate in designing, leading and analyzing quality-improvement projects and

Modern day PAs are licensed medical professionals, with medical-model, graduate-level education. A growing number of these professionals also have earned doctorates or completed further advanced clinical training in medical or surgical specialties.

research projects and in implementing evidence-based practice.

Over the last 50 years, Mayo Clinic PAs have made significant contributions towards clinical practice, education and research. “PAs in general have been chosen for this profession because of their service orientation and compassion, in addition to being brilliant,” says Huckabee. “This creates a pool of solid individuals that typically hold the respect of others, use common sense and maintain the priority of serving the patient.” MM

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The authors would like to thank the numerous Mayo Clinic PAs who have created a strong enduring professional culture within the organization and who have encouraged and mentored future PAs. Special thanks to Michael Huckabee, PhD, MPAS, PA-C and Michael Halasy, DMSc, MPAS, PA-C for your support and review of this work.

You.



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SOCIAL DETERMINANTS of HEALTH



Beyond the medical history checklist

It's long been clear that an individual patient's medical issues—from symptoms to treatment to results—are impacted, and may be caused, by conditions that at first glance seem to have nothing to do with whatever brought them to the clinic or the emergency room.

Does the patient have safe housing? Do they live in an area with significant air pollution? Do they have a job? Do they have friends?

Social determinants of health (SDOH) are, according to the Office of Disease Prevention and Health Promotion (ODHP) in the U.S. Department of Health and

Human Services, “the conditions in the environments where people are born, live, learn, work, play, worship and age that affect a wide range of health, functioning and quality-of-life outcomes and risks.”

SDOH can account for as much as 55 percent of health outcomes. For example; several research studies have shown that unemployed people tend to suffer more from stress-related illness, including high blood pressure, stroke, heart attack, heart disease and arthritis.

The last Minnesota Statewide Health Assessment, issued in 2017 and updated in 2019, stated: “Decades of study on the social determinants of health show that the policies and processes that shape the daily circumstances of our lives are what really create health. Our individual behaviors are overshadowed by a much larger set of economic and social forces put into action by policy decisions at every level of government.”

The ODHP groups SDOH into five “domains”: healthcare access and quality, neighborhood and built environment, education access and quality, economic stability and social and community context. Some organizations have longer lists of SDOH, often giving more emphasis to racial discrimination. The American Academy of Family Physicians, for example, lists 17 separate SDOH, including sexual identification and spiritual/religious values.

Examples of SDOH include:

- Food and physical activity opportunities.
- Polluted air and water.
- Racism, discrimination and violence.

Social Determinants of Health



Medical students learning from and helping homeless patients

BY GRACE JOHNSON AND DERRICK LEWIS

Almost 20,000 Minnesotans are unhoused on any given night, and more than 50,000 Minnesotans experience homelessness at some point throughout the year, but medical students receive little formal training on how to address the needs of unsheltered patients. To better equip ourselves and our peers to care for this vulnerable population, we partnered with the Zumbro Valley Medical Society (ZVMS) this past year to host a series of virtual presentations entitled, “Serving Patients Experiencing Homelessness.” Stakeholders from myriad sectors, including non-profits, local government and the Rochester school dis-

- Education, job opportunities and income.
- Housing, transportation and neighborhoods.

SDOH exist on a spectrum, from the wealthiest, best-educated living in comfortable homes with stable, well-paid jobs to the poorest, least-educated living with economic and housing instability. The current focus on SDOH is, clearly and logically, on those at the lower end of the spectrum in one or more areas.

Most physicians and health systems understand that to be effective at working with and helping a patient, they need to assess that person’s SDOH. Intake interviews may go beyond asking about medications, immunizations and symptoms to include information about the living and working conditions of a patient. Some physicians have decided that they need to do more than their important work with individual patients and have become actively involved in trying to improve SDOH for the communities in which they live and work, well beyond the clinic. **MM**

trict, spoke about their efforts to address homelessness and shared ways in which physicians can optimize care for patients who are unhoused. A few takeaways from these conversations:

An open mind and a willingness to listen to our patients leads to better care.

Too often, unsheltered patients face discrimination in healthcare settings and may experience intense anxiety about seeking medical care. By putting aside preconceived notions and inviting patients to share their stories with us, we can help them feel welcome in the clinic or hospital. Taking time to build trust and rapport also increases the likelihood that patients will follow through with recommendations and return visits.

By becoming aware of the health needs and day-to-day challenges experienced by homeless patients, we can develop more effective treatment plans.

Patients experiencing homelessness face unique health risks, such as exposure to extreme weather conditions, food scarcity and limited access to sanitation facilities. These factors should be considered when devising recommendations or discharge instructions. Simplifying medication regimens and minimizing specialty referrals when possible can make it easier for patients to follow treatment guidelines. It is important to celebrate small steps in the right direction and focus on harm-reduction strategies when necessary.

Homelessness is a systemic issue that requires a multidisciplinary approach.

Collaborating with professionals in other sectors (e.g., social workers, mental health providers and homelessness liaisons in schools) and staying informed about community resources help us connect patients to appropriate services upon leaving the

clinic or hospital. We can further leverage our positions as medical providers to advocate for social change on a broader scale, including improved access to affordable healthcare, housing and social support in our communities.

Of course, no amount of didactic train-

For more information

Learn more about homelessness and resources. <https://zvms.org/zvms-series-on-serving-patients-experiencing-homelessness/>

ing can fully equip us to serve those who are unsheltered, because every patient requires an individualized approach to care. It is essential that we practice humility in the face of what we do not know and welcome the opportunity to learn from our patients themselves. We have the privilege of supporting those who might otherwise have no one. While we may not get it right every time, we can do our best to honor the trust that patients place in us.

ZVMS is continuing to explore collaborations with community partners to support the health of underserved populations, including families and children who are unsheltered or inadequately housed, undocumented workers, veterans and rural residents. **MM**

Grace Johnson and Derrick Lewis are third-year medical students at Mayo Clinic Alix School of Medicine.

more →

Social determinants of health

MORE THAN A SAFETY NET

Community health clinics take a comprehensive approach to helping patients overcome barriers in their social determinants of health

BY SUZY FRISCH PHOTOGRAPHY BY RICH RYAN

INDIAN HEALTH BOARD Minneapolis

The scent of smoldering sage and sweetgrass greets people as they arrive at the Indian Health Board (IHB) COVID-19 vaccination clinic. Before or after their shot, they can smudge, holding a small bowl of kindled herbs and wafting smoke over themselves for spiritual grounding and cleansing. It's nothing out of the ordinary, though. The 50-year-old clinic, rooted in the Little Earth neighborhood of Minneapolis, serves its community by weaving Western medicine and traditional Native American practices in ways big and small.

Patrick Rock, MD, has been seeing patients at the Indian Health Board for nearly 25 years. "I feel like I was made for this work," he says. About half the patients at the Indian Health Board are, like Rock, Native people. He is a member of the Leech Lake Band of Ojibwe.

Founded to serve the health needs of American Indian and Alaska Native people living in the Twin Cities, the Indian Health Board is an important resource for a broad cross-section of people (about half of its nearly 5,000 patients are Native people). Patients rely on IHB for medical and dental care, mental and behavioral health services, medication-assisted treatment for addiction and wellness programs—the one-stop shop of a community health clinic and Federally Qualified Health Center.

An essential element that helps IHB shine is the deep and trusted relationships it has built with multiple generations of families over the years, says CEO Patrick Rock, MD, a family medicine physician who has seen patients at IHB for nearly 25 years. Many IHB providers have long tenures at the clinic. And many, like Rock, are Native American.

A member of the Leech Lake Band of Ojibwe, Rock can't see himself working anywhere else.

"I feel like I was made for this work. Even though it might be stressful at times, it provides me with direction and fulfillment in my life," he says. "I see the people I serve in me—I see the people I serve in my family."

The stress sometimes stems from hearing about the struggles patients have with many social determinants of health, including poverty, housing troubles, and undiagnosed or untreated mental health problems. Historical trauma that gets transferred from generation to generation—often emerging in the form of diabetes, heart disease, substance abuse, and homelessness—contribute to the many health disparities of Native Americans. "I always say we could use 10 of these buildings to address all of the things we're seeing," Rock says.



Social determinants of health



ABOVE: Pediatrician Angela Erdrich, MD, finds it gratifying to care for multiple generations of patients. She is a member of the Turtle Mountain Band of Chippewa. Care at the Indian Health Board includes modern medicine, but also incorporates Native practices, including burning smudge for spiritual grounding and cleansing.



that uses creative approaches to make sure its patients get the best possible care, Rock says.

Innovation can be found throughout IHB, including its counseling programs that incorporate drumming and the community garden where staff provide hands-on nutrition and diabetes education. After the Affordable Care Act went into effect, Rock led an effort to transform IHB into an accountable care organization. This structure paved the way for IHB to adopt a metric-based population health and quality approach. It also brought more care coordinators and diabetes coordinators on board who manage care for patients in a holistic way. Combined, this allowed IHB to drastically reduce hospital utilization and save millions of dollars in healthcare costs, Rock says.

Although it is sometimes difficult work, pediatrician Angela Erdrich, MD, finds it gratifying to care for multiple generations of patients and be trusted with their stories. She's proud of the services IHB provides, such as family planning and sexual health education for male and female teens. Prenatal care incorporates spiritual practices such as providing kits for patients to make amulets out of a newborn's umbilical cord.

Erdrich often sees patients who are extremely stressed. There are the great-grandparents and grandparents caring for their grandchildren, often in crowded housing, and families living in poverty. Some are fierce—occasionally demanding—advocates for their children, but Erdrich cheers them on with understanding of where they are coming from.

A member of the Turtle Mountain Band of Chippewa from North Dakota, Erdrich spent the first 13 years of her career working across the country for the Indian Health Service. She joined IHB in 2010. Erdrich says the work is her calling, and she enjoys making bonds with patients who trust her and IHB.

"I wish I could do more sometimes," Erdrich says. Patients' life experiences can feel overwhelming but, "I like the patients and I like the families. Something profound happens every week and it surprises you and you feel inspired. My patients and my families inspire me."

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IHB's clinicians are able to provide exceptional care despite the challenges, he says, because they have a deep understanding of their patients and the obstacles they face. "Providers in a large system might not know what goes on in this community—they don't necessarily see or feel the kind of issues that have a direct impact on the everyday lives of the people here," Rock says.

Other providers might not be familiar with the three-pronged medical systems that Native American people often use. Many maintain close connections with their tribal lands and obtain care through tribal health services and/or the Indian Health Service, too. Before IHB became the first urban Indian clinic in the United States in 1971, Native Americans primarily got their care from the Indian Health Service. The urban clinics in particular struggle from underfunding, Rock says, receiving just 1 percent of federal funding for Native Americans' health care, yet 70 percent of the Native population now lives in urban centers.

The difficulties patients face are at the forefront of many of Rock's interactions with them. He knows that when he walks into an exam room, people often want to talk about what is happening in their lives, along with discussing their hypertension.

"People have the idea that their story of having access to food or transportation or a home is not the first time I've heard that, and that I can understand it," Rock says. This sharing and understanding nurtures trust between physician and patient, and between IHB and the community. "We've come from the community. A lot of our organizational employees are from this community, and there is a lot of personal capital that has been built over the years."

This trust enabled IHB to set up a well-received COVID-19 testing and vaccination site for the community in 2020 and 2021. That's because IHB is more than a clinic. It's a public health entity

Social determinants of health

Community health clinics

(continued from previous page)

ACCESS FAMILY MEDICAL CLINIC Worthington

The 13,000 residents of Worthington, Minnesota, are a diverse bunch who speak more than 40 languages. So, Larry Foster, DO, a family medicine physician, has gotten used to finding creative ways to communicate with his patients at Access Family Medical Clinic. Through family members, interpreters and a language line, Foster finds a way to provide primary care, diagnose problems and offer solutions.

A Federally Qualified Health Center, Access provides primary care for all ages, urgent care, behavioral health services and health education through partnerships with Rural Health Care, Inc., and Avera Medical Group. The clinic sees a varied population, from children with lacerations to seniors with chronic conditions, military veterans, migrant workers and everyone in between. Many of the patients work at meatpacking plants in Worthington and Sioux Falls, which accounts for much of the city's diverse population.

This diversity—with assorted ideas and cultural approaches to health and medical care—brings unique challenges to the exam room. Some patients are having their first experiences with Western medicine. Foster sometimes needs to navigate what patients are communicating—or avoiding—due to different ways of explaining symptoms.

Foster enjoys his work and finds it rewarding to help people. There are difficulties, of course. That includes patients who come in only when something is wrong, and parents who pour their resources into their children while paying little attention to them-



selfs. Foster would like to provide more preventive care to keep issues from blowing up into significant medical problems, which is tough when patients come in sporadically.

“They don’t have a mindset of prevention and maintenance, so we see uncontrolled blood pressure, diabetes, chronic lung issues, visual problems. I’m addressing those and trying to put out the fire while at the same time trying to address wellness,”

Foster says. “But there are time constraints, and the next person has more problems than the last one.”

Foster worked in the Twin Cities suburbs and Mankato before moving to Worthington in 2011 to be near his wife’s elderly parents. During the past decade at Access, he has forged good relationships with patients. Since it became an FQHC in 2015, the clinic has strengthened its focus



Larry Foster, DO, has had to find creative ways to connect with patients at Access Family Medical Clinic in Worthington. His patients include migrant workers, low-income families, veterans and more.

Choices are limited in food deserts

I read last month's articles about obesity in *Minnesota Medicine* with interest. I was concerned that there was little mention in the primary article of the complexity of factors surrounding this issue and specifically commented on the existence of what have been labeled "food deserts." The term "food desert" was apparently first used in the United Kingdom to describe "populated urban areas where residents do not have access to an affordable and healthy diet." This refers to neighborhoods that have no easily accessible supermarkets. Instead, corner stores and often fast-food establishments predominate. These venues generally offer a selection of overpriced, high trans-fat and sugar-filled foods. In the Twin Cities, these food deserts occur almost exclusively in neighborhoods with higher populations of Black, Brown and Indigenous persons.

Living in a food desert is but one small example of an economic and social condition that influences health: in this case, weight. It is too easy, in an exam room, to see choices as being unique to an individual when, instead, those choices may relate to access and poverty. Scott Steven's article in the same issue, "An orthopedic perspective on obesity", does a good job addressing the many complex factors to consider in approaching this. I recommend that anyone working with patients they consider to be obese review it. I echo his conclusion that healthcare providers need to intervene at individual, community and societal levels to have real success in improving patient's quality of life. Let your voices be heard at the local, state and national levels! **MM**

Janet Schmitt, MD, is certified in family medicine, with a private practice in Minneapolis focused on the integrative and pharmacologic support of adults healing from a spectrum of trauma-related disorders.

ELECTRONIC TOOLS FOR SOCIAL DETERMINANTS OF HEALTH

To understand how social determinants of health (SDOH) may impact a patient's illness, treatment and outcomes, healthcare professionals need to screen for them. But information about housing, education, social support, access to healthy food, etc. is not easy to gather—and even harder to share effectively. Generally, it's not part of an electronic health record, so even if a patient is asked about SDOH, it may remain simply a clinical note.

Not surprisingly, digital software has stepped up to provide both screening tools and links to resources. Several companies offer SDOH digital tools, and some health systems develop their own.

When the pandemic hit, Allina Health moved from having front desk workers screen patients on paper to developing a digital method. With no front desk, the process of taking information and then transcribing it into an EHR was time-consuming and labor-intensive. Allina modified software to build a screen into its patient portal, so patients could document and review it before a virtual visit, with responses going directly into the EHR.



ABOVE LEFT: Hannah Halls, patient service manager, works with a diverse group of patients at Access Family Medical Clinic in Worthington. BELOW LEFT: Larry Foster, DO, and Megan Poelaert, RN, provide services ranging from education and preventive care to, through a partnership with the Avera Medical Group, specialty care.

on prevention and offers services on a sliding fee scale. Its partnership with Avera also gives patients access to specialty care, surgery and diagnostics, including comprehensive radiology services like mammography, MRIs and bone density scans.

Access puts effort into making sure patients can access its services, providing bus or taxi tokens or coupons for gas. It also has a nurse care coordinator and a community health worker who find resources that help cover medication costs or make connections with social services. Staff work to keep patients healthy in a variety of ways, such as giving and installing car seats for expectant parents. Before COVID, Access offered educational programs on managing blood pressure, diabetes, nutrition and more.

Foster knows that his patients contend with many challenges, including adjusting to life in the United States and dealing with a lack of transportation, child care or food. He does what he can to help and knows that his work is making an impact on patients' lives.

"I find what I do rewarding, and I look forward to coming to work," Foster says. "It is challenging but worthwhile, to help each patient and their family." **MM**

Suzu Frisch is a Twin Cities freelance writer.



Social determinants of health

PHYSICIAN ADVOCATES

Devoting energy to improving the systemic and societal problems that affect their patients' well-being

BY SUZY FRISCH



Housing

Janna Gewirtz O'Brien, MD, MPH

Assistant professor in the Division of General Pediatrics and Adolescent Health at the University of Minnesota Medical School Twin Cities and adolescent medicine physician in the Department of Pediatrics at Hennepin Healthcare, after completing a fellowship in adolescent medicine at the University of

Minnesota in June 2021

It seemed like a simple question for an adolescent with uncontrolled asthma. Why hadn't he filled the prescription Janna Gewirtz O'Brien, MD, gave him? A patient at the school-based clinic where O'Brien worked, the teen was still struggling with shortness of breath. His answer was eye-opening: He and his family were experiencing homelessness and his medication went missing as they shuttled between three homes. Getting more was the least of his concerns.

"He didn't have a place to stay, and here I am talking about Albuterol," says O'Brien, who then worked at a school-based clinic. "I was finding that many of my patients were unstably housed. They looked like every other young person I saw, but they were struggling in lots of different ways. And their housing situations often weren't identified until they were directly asked."

AAFP SCREENING QUESTIONS

The American Academy of Family Physicians (AAFP) has developed an SDOH screening tool (available online https://www.aafp.org/dam/AAFP/documents/patient_care/everyone_project/hops19-physician-guide-sdoh.pdf) with simple, clear questions about a person or family's living situation, including:

- Think about the place you live. Do you have problems with any of the following? (Check all that apply.) *Bug infestation, mold, lead paint of pipes, inadequate heat, oven or stove not working, no or not working smoke detectors, water leaks . . .*
- Do you put off or neglect going to the doctor because of distance or transportation? *Yes or no.*
- Within the past 12 months, you worried that your food would run out before you got money to buy more. *Often true, sometimes true, never true.*
- Do you have a job? *Yes or no.*

The site also includes links to resources and tools for connecting patients to services they may need.

As O'Brien dug into the issue, she learned that young people's housing challenges often fly under the radar but exacerbate numerous mental and physical concerns. Many youth facing unstable housing have a history of trauma, abuse and exploitation,

"Youth experiencing homelessness face significant gaps in healthcare services. It doesn't help that silos between healthcare, education and housing systems prevent a coordination of support."

—Janna Gewirtz O'Brien, MD, MPH

substance use, chronic illness, depression and anxiety and limited family support. The structural inequities that lead to housing instability, including racism, marginalization and oppression, are only compounded by the experience of homelessness. Yet youth experiencing homelessness face significant gaps in healthcare services. It doesn't help that silos between healthcare, education and housing systems prevent a coordination of support, O'Brien says.

Eager to address the inequities that lead to and are compounded by housing instability and homelessness, O'Brien came to the University of Minnesota in 2018 for a fellowship in adolescent medicine and a master's in public health in executive public health administration and policy. She will apply her training to improve health and promote health equity among youth experiencing homelessness and work to better integrate services between healthcare, education and housing entities.

"It's fairly obvious when you think about it—that housing and health are interconnected," O'Brien says. "When people are housed, studies have shown that their health outcomes improve."

Post-fellowship this summer, O'Brien will continue her community-engaged research and advocacy to promote adolescent health equity and optimize health services for youth experiencing homelessness and other historically marginalized youth. She also will lead the adolescent medicine rotation for the University of Minnesota pediatric residency programs. O'Brien's clinical work will be based at Hennepin Healthcare, where she is growing the

Adolescent Medicine program and building a Teen-Tot Clinic for pregnant and parenting youth and their children, with a focus on young families who are experiencing homelessness.

This will build on her current partnership with The Bridge for Youth, where she provides shelter-based healthcare for youth experiencing homelessness and leads a health empowerment program for pregnant and parenting youth. After building connections with the young people there, O'Brien found that many youth lack a consistent medical home and sustained connections for themselves and their children.

"I'm trying to build a primary care and health resource that meets the needs of young people experiencing homelessness. We will meet them where they are and work to create a safe and supportive space tailored to meet their needs," O'Brien says. "We want to create a pipeline for long-term primary care connections."

O'Brien also is deeply involved with advocacy and policy, working with organizations like Minnesota Doctors for Health Equity and serving on the executive board of the American Academy of Pediatrics in Minnesota. Along with her housing advocacy work, she targets ways to improve medical care for vulnerable and marginalized youth.

The challenges facing such teens are steep and entrenched, yet this advocacy work is integral for O'Brien. It makes her feel like she's making inroads on adolescents' social drivers of health—an important way for her to prevent burnout. She also gets buoyed by her patients, whom she finds resilient, savvy and hopeful.

"I think advocacy work is rejuvenating. I was much more likely to become burned out when I only did work in a clinical setting and saw all of the structural issues," she says. "I can only do so much in a clinical setting. Less than 10 percent of health is directly related to patient care. As physicians, we benefit when we work on the other 90 percent of things that impact patients' lives."

Housing instability is a natural point of entry for addressing health equity because stable shelter and sustained access to healthcare can make a huge difference. "We can bolster family ties, reduce harm, treat healthcare needs and build safe spaces where people can come back and, over time, build long-lasting relationships with the healthcare system," O'Brien says. "There is a lot we can do by making a system that works for young people experiencing homelessness."



Racism/equity

Eduardo Medina, MD, MPH

Family medicine physician at Park Nicollet Clinic, Minneapolis

Growing up the son of Colombian and Puerto Rican immigrants in New York City, Eduardo Medina, MD, saw that the environment where people live plays an outsize role in their health. Many members of his community had high rates of chronic illness, his mother developed breast cancer and his uncle had a stroke at a young age. They all encountered so-

HEAT ISLANDS AND PEOPLE OF COLOR

A study published this year in *Nature Communications* found that in nearly all large urban areas, the average non-white person lived in a census tract with higher heat island intensity. This was true in all but six of the country's largest urban areas, according to Glenn Sheriff, co-author of the study and environmental economics professor at Arizona State University.

The study, done in 2017, showed that exposure to heat islands—places that generally have lots of concrete and little grass, trees or bushes—was of greater intensity for the average person of color than it was for the average person living below poverty, suggesting that more than economics was at play.

Heat islands create hotter days, less nighttime cooling and higher air pollution, conditions that can contribute to deaths and illness, including respiratory difficulty, stroke and exhaustion, according to the Environmental Protection Agency.

cial determinants of health that were barriers to getting the vital medical care they needed.

"Unless we're talking about the conditions that lead to poor health, then we are not talking about healthcare. We can't separate poor health outcomes in patients from the conditions in which they occur," Medina says. "If we don't address the social determinants of health, we're leaving a lot of opportunities underutilized."

“Unless we’re talking about the conditions that lead to poor health, then we are not talking about healthcare. We can’t separate poor health outcomes in patients from the conditions in which they occur. If we don’t address the social determinants of health, we’re leaving a lot of opportunities underutilized.”

—Eduardo Medina, MD, MPH

As a population-health-focused family medicine physician, Medina had already witnessed steep health disparities facing his patients. Then COVID-19 and its disproportionate devastation in BIPOC communities served as a gut punch that Minnesota still needs to make extensive improvements in health equity. He was astounded that the state did not use an equity approach to dis-

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tribute vaccines to the hardest hit communities, a confirmation to him of systemic racism.

Medina serves on the Covid Response Disparities Task Force at the University of Minnesota and the Vaccine Equity Committee at HealthPartners. He uses expertise and experience to champion an equity approach for COVID testing and vaccines. Medina knows his advocacy prompted some changes that expanded outreach to non-English speakers, “but it’s not enough.”

“Members of society who have been historically marginalized and disenfranchised from the political, economic and civic infrastructure are at high risk for poor health outcomes. These are the social determinants of health that help to explain why the same communities that suffer disproportionately from police brutality also have higher age-adjusted mortality from COVID-19,” Medina says.

“You may think that’s just a coincidence, but any serious review of history shows that it’s not a new problem. The question that faces doctors is: Are we going to engage with this or are we going to ignore it?”

Medina has worked for years to ensure that physicians and others don’t ignore it. His efforts on equity in Minnesota began shortly after he arrived in 2005 for a master’s degree in public health and medical school at the University of Minnesota. He was

SCHOOL-BASED HEALTH CENTERS IN MINNESOTA

Anchors of stability and vital bridges to reach children, youth and families

BY ABBE PENZINER-BOKDE, MD

When I asked her what she meant by, “yes, I think I have a learning disability,” an answer to a question on the general wellness School Based Health Center intake form, she replied that she didn’t write. “Some of my teachers just let me tell them my answers, but some don’t.”

She didn’t remember having any evaluation and there were no formal supports in place for what sounded like dysgraphia, a known specific learning disability. She was 18 and about to graduate, and did not know how she would manage this in college and

in the workplace—“If I go to college.” She also needed new glasses, but didn’t want to worry or burden her father with this. She and her dad had been unstably housed for years, had just settled into a place and she really was not sure that she could get to an eye doctor any time soon. Today, though, she really hoped she could get her allergy and

asthma medication refill. Their insurance had lapsed and she heard from a friend that we had an onsite pharmacy that offered these medications at no cost to her or her father.

This scenario is one of many that I have encountered as a pediatrician in a School Based Health Center (SBHC) setting. Because we routinely screen for general health and psychosocial issues, because

we have an onsite pharmacy, because we were on school grounds with her guidance counselor and principal down the hallway, and because the optometry screening and glasses program would be onsite next week (learned real-time in a brief conversation with the licensed school nurse the next door over), I knew there were immediate steps to begin a process of addressing her interwoven unmet medical and learning needs. We could also connect her and her father to an insurance navigator at our sponsoring organization, a local FQHC (Federally Qualified Health Center).

This is school health in action

Since the early 1970s, SBHC programs in Minnesota, among the first in the nation, have been imbedded within schools as a way to offer barrier-free primary and mental health care in a one-stop hub where children and youth spend the majority of their waking hours: school. With nearly 25 programs (at this time located primarily in and around the Twin Cities), they have been, and continue to be, a literal and figurative home team, whole-health advantage for thousands of Minnesota students each year.

It has long been known that healthy students learn better (well supported by the literature and common sense), and in collaboration with proven traditional school health supports like LSNs (Licensed School Nurses), OT/PT/speech therapists, guidance counselors, psychologists and social workers, to name a few, SBHCs in Minnesota ensure that no one is turned away for care, regardless of insurance status and ability to pay, and fees are not transferred



Social determinants of health

surprised to find a dearth of coursework in the School of Public Health about structural racism and health inequities. Medina joined with other students to advocate for more curricula covering the systemic underpinnings of health disparities. The school added a health equity minor in 2007.

Medina also engages in research and advocacy to address structural racism in medical care. In recent years, he has co-written articles for the *New England Journal of Medicine*, seeking to educate other physicians and provide strategies for dismantling systemic racism. Among them: desegregate the healthcare workforce, make mastering the health effects of structural racism a medical competency and mandate and measure equitable outcomes as healthcare does with quality and safety.

“Any society that’s structured based on a hierarchy of racism, that will infect every structure we have in that society: education, criminal justice, environmental health and certainly medicine,” Medina says. “We have to name it clearly, because if we don’t say it, we can’t change it.”

He keeps saying it. When seeing patients, Medina gives them space to say it, too. He seeks to provide whole-person care encompassing patients’ physical and mental health. So, he opens the door for people to talk about their traumas and barriers to health.

“You stand shoulder-to-shoulder with your patients. I know we’re not going to fix all of the problems in a 20- to 40-minute visit, but I want my patients to know that they are not alone,” Medina says. “We give them space to talk about the things they want to talk about, and we give them space for health and wellness and support.”

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to students or their families. They can be stand-alone, or an integral part of a full-service community school wrap-around service. While most in Minnesota serve high school-aged youth, some programs extend care to all ages and to the community at large.

This is child- and youth-centered programming in action

SBHCs are a concrete, time-tested model of healthcare access for school-aged children and youth that positively and simultaneously impacts health and educational outcomes, as cited by The Community Guide in their latest Community Preventive Services Task Force (CPSTF): *Health Equity: School-Based Health Centers* (<https://www.thecommunityguide.org/findings/promoting-health-equity-through-education-programs-and-policies-school-based-health-centers>).

As in programs across the United States, SBHCs in Minnesota rely on healthcare funding models such as third-party billing, Title V Child and Maternal Health grants, health department budget allocations, Foundation support and higher education academic institution support. Presently, they are sponsored by seven organizations, from the largest FQHC in the state, Minnesota Community Care, to the Minneapolis Health Department, Northpoint Health and Wellness, the Park Nicollet Foundation, Mayo Clinic, Minnesota State University at Mankato and St. Catherine University. They employ a team approach to care delivery, with basic staffing consisting of a medical assistant and a nurse practitioner, physician’s assistant or physician. Clinical mental health professionals, health educators and nutritionists are also built into most of the programs in Minnesota, and many coordinate with community-based dental and ophthalmology services. Labs, vaccines and medications are onsite and federal and statewide health care regulatory standards and protocols are followed as they would be in any healthcare entity.

The Minnesota School Based Health Alliance (MN SBHA) is the collective voice of SBHCs across the state. It works with stakehold-

ers such as the Minnesota Department of Health, the Minnesota Department of Education and the Department of Human Services, as well as school districts, healthcare professionals, community leaders and policymakers to strengthen and expand this model of barrier-free healthcare access for children and youth in Minnesota.

School Based Health Centers are an easily accessible, trusted, efficient model of federally-recognized safety net whole-healthcare delivery, and they are a uniquely positioned to intentionally disrupt systems inequities in both health and education that leave far too many Minnesota children and youth behind, particularly children and youth within historically marginalized communities along the lines of race, ethnicity, geographic location and family socio-economics.

The COVID-19 pandemic has laid bare the gaps in child and youth policy and programming that many of us in the community and public health fields have been working uphill against for years. It will take an “all hands on deck” multifaceted, multidisciplinary approach for true healing and recovery, with priority given to those who need us most in the post-pandemic era and beyond.

School Based Health Centers are not the only solution, but if we as a state are serious, sincere and urgent about our unwavering commitment to full health and educational attainment for *all* Minnesota children, youth and families (I have no choice but to believe that we are), then we must consider how to expand access to this time-tested, equity-centered model of care. **MM**

Learn more about SBHCs and advancing school health in your community at www.sbh4mn.org.

Abbe Penziner-Bokde, MD, is a board-certified general pediatrician with Allina Health and Minnesota Community Care. She also serves as a voluntary founding executive board member of the MN School Based Health Alliance. Previously she served as a supervising medical doctor and field physician with the New York City Office of School Health, an interagency division of New York City government.

more →

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Improving systemic and societal problems...

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For Medina, it's how he serves the community, striving to make the state a place where everyone has access and opportunities to enjoy what we love about Minnesota.



Access to medical care

Rozalina McCoy, MD, MS

Endocrinologist and internal medicine physician at Mayo Clinic in Rochester; associate professor of medicine; medical director of the Mayo Clinic Ambulance Service Community Paramedic Program

The challenges Rozalina McCoy's patients experience with social determinants of health are apparent the minute she asks what help they need to manage their diabetes. Often, it isn't handling the disease itself—it's everything else. Insurance troubles, food scarcity, an unforgiving work schedule, a lack of stable housing. She saw that it takes a full-throttled approach to keep their diabetes in control.

ADULT EDUCATION HELP

UCare and GEDWorks are partnering to help UCare members earn their General Educational Development (GED).

The two organizations piloted a program in 2019 in select counties to waive the cost of GED preparation and testing for a limited number of UCare members enrolled in Families & Children Medical Assistance and MinnesotaCare programs; 28 people have since earned their GED.

This year, the program is expanding statewide for an additional 1,000 members, including adults with disabilities.

Besides waiving the cost of the GED test, the program offers:

- Advising and coaching.
- Unlimited practice tests and study materials.
- Access to bilingual (Spanish and English) advisors, tests and study materials.
- Official GED credential tests.
- A career path tool with training on soft skills that help with resume building and job interviewing.

The prep and tests are online and by phone, making the program accessible for people living in rural areas.

According to the American Public Health Association, adults who don't complete high school have poorer health and are more likely to die prematurely from preventable conditions such as cardiovascular disease, diabetes and lung disease.

UCare is an independent, nonprofit health plan in Minnesota and western Wisconsin. GEDWorks is an education benefit from the creators of the GED.

“There is a lot of data and literature on physician burnout and stress, and a lot of it comes from powerlessness. Our patients are struggling, and we can't fix their insurance and social determinants of health. For me, the community paramedic program gives me the capacity to actually change things for my patients and be proactive in helping them live better lives.”

—Rozalina McCoy, MD, MS

“You can't live well with diabetes if you aren't living well overall—if you can't access medications or food or housing or your clinical team,” says McCoy, MD, a clinician and researcher in healthcare and policy who focuses on diabetes treatment.

While researching hypoglycemia (very low blood sugar), McCoy found a common thread of disparities, including race, income, insurance status and more. Her research and clinical experience also revealed the difficulties with continuity of care when emergencies are not reported in timely way to primary care physicians or are not acted upon even when they are known.

That led McCoy to consider the role of paramedics and ambulance services in diabetes care, inspiring her to try a fresh approach. Paramedics play an important role in serving all nooks and crannies of society. They are highly skilled, connected to the communities they serve and easily mobile. Why not deploy them to help patients with medical care plus some of their other challenges?

The Mayo Clinic Ambulance Service already had a community paramedic operating in rural northwest Wisconsin. McCoy created a pilot program for community paramedics to help patients with uncontrolled diabetes. She started in late 2019 to develop assistance in three Rochester region counties, mainly targeting people in rural areas without access to diabetes care. Her team is now building on this program to also engage patients after they experience severe hypoglycemia.

“Our patients have severe hyperglycemia or hypoglycemia and socio-economic barriers—people with food and housing insecurity or unable to afford their medications,” McCoy says. “If we can train EMTs and paramedics to deliver community healthcare, we can address a lot of the gaps that our patients have. Community paramedics can do an incredible amount,” including connecting patients with food resources, social services, community programs and medications.

Social determinants of health

The Mayo community paramedic program became even more vital during COVID, while people with diabetes were isolated and more at risk from the virus. In fall 2020, Mayo community paramedics started serving homeless people who were quarantining in shelters, delivering medications and assessing their overall health. Next, McCoy's team opened a clinic at The Landing MN, a Rochester day center for people experiencing homelessness. Community paramedics provide services like medication and chronic disease management, blood sugar and blood pressure checks and wound care.

In a short time, McCoy has become steeped in building programs and services to help patients experiencing significant barriers in their social determinants of health. "It's very different from the research I'm used to doing, which is working with big data and identifying problems," she says. "But to me it's so incredibly rewarding to start addressing problems. It's been the most rewarding thing I've ever done."

McCoy enjoys bringing together her clinical experience, her research lens and a deeply committed team at Mayo who want to help patients with complex problems. Each setting informs the other and provides insight into how McCoy can continue to improve care that addresses people's many challenges. It also keeps her from feeling hopeless in the face of their difficulties.

"There is a lot of data and literature on physician burnout and stress, and a lot of it comes from powerlessness," McCoy says. "Our patients are struggling, and we can't fix their insurance and social determinants of health. For me, the community paramedic program gives me the capacity to actually change things for my patients and be proactive in helping them live better lives."



Environment

Kristen Bastug, MD

Pediatrics resident, University of Minnesota Medical School, Minneapolis

Kristen Bastug, MD, was steeped in biology, ecology and environmental science as an undergraduate, so she was surprised how little climate change and its effect on health was covered in the

medical school curriculum. It's something all physicians are or will be seeing soon, she says, whether it's a longer allergy season, a wider spread of mosquito-borne illnesses like Zika and malaria or disrupted medical supply chains from severe weather.

"When I went to medical school, not a lot of people were formally talking about climate change as part of the curriculum. That was interesting to me because it really does impact health," Bastug says. "The duty of doctors is to think about health and all the ways it impacts our patients. Climate change affects our patients no matter what specialty you go into."

In 2016, Bastug and other medical students joined with nursing students, public health students and dentistry students to start Health Students for a Healthy Climate at the University of Minnesota. The interdisciplinary organization now includes students

from all Academic Health Center programs, including dentistry, public health and pharmacy.

Healthy Students for a Healthy Climate advocates for a stronger curricular focus on how climate change is influencing health and reducing the environmental impact of the health care sector. Since its start, the group has logged successes in getting climate change incorporated into more of health programs' coursework.

"The duty of doctors is to think about health and all the ways it impacts our patients. Climate change affects our patients no matter what specialty you go into."

—Kristen Bastug, MD

Bastug also has been involved with the Twin Cities Medical Society Environmental Health Task Force, surveying physicians about climate change and planning lectures at the medical school. She also joined a quality improvement project at the Minneapolis VA Medical Center. The team evaluated waste from the operating room and worked with Hennepin County on determining what could be recycled, presenting their findings at the CleanMed conference.

These experiences fueled Bastug's desire to continue being an advocate for environmental health, preventing climate change and raising awareness about how it affects global health. She sees climate change as a health equity issue, with the United States being the world's second largest greenhouse gas producer. Yet low- and middle-income countries feel a disproportionate effect of the warming climate and have fewer resources to adapt.

Legislation will be essential to addressing environmental health equity, Bastug says. To that end, she has gotten more involved in policy, including lobbying Minnesota legislators with members of the American Academy of Pediatrics. Bastug recently participated in its national advocacy conference and a United Nations advocacy event centered on ending malaria.

Bastug plans to continue this work in the future as a pediatric infectious diseases physician; she begins the Pediatric Infectious Diseases Fellowship Program at the University of Minnesota next summer. She's cheered to see momentum building to address health and climate change in medical school and beyond.

"My journey through advocacy so far has taught me that it's important to raise your voice with groups of other people to have big impacts," Bastug says. Though it's been harder to find time during residency to commit to environmental advocacy work, "I find that it brings me energy to engage in things I care about."

(continued on next page)

Social determinants of health

Improving systemic and societal problems...

(continued from previous page)



Food and nutrition

David Tilstra, MD, MBA

Community transformation officer and clinical geneticist, CentraCare in St. Cloud

David Tilstra, MD, admits he was skeptical in the early 2000s when health systems' quality improvement efforts emerged as the way to improve community health. Then the results from a wide-ranging initiative in St. Cloud changed his mind—and the direction of his career.

As medical director of CentraCare Clinic at the time, Tilstra joined a group of community leaders to reduce childhood obesity

I became a believer that you have to get out in the community and work on these things ... If where we live, work and play has that much influence on our health, we have to make it easy for people to be healthy, which will ultimately change the overall health of the community.”

—David Tilstra, MD, MBA

in the region. Their efforts prompted about 150 policy and other changes. They worked with grocery stores and schools on offering more healthy foods, arranged for additional farmers markets and encouraged physical activity with new sidewalks and bike lanes. Over seven years, BMIs for children ages 5-12 dropped consistently compared to those who did not live in the project's targeted zip codes.

“I became a believer that you have to get out in the community and work on these things. We often hear that 10-20 percent of health is the responsibility of the healthcare system, 20-30 percent is behavior and 50 percent is the community where you live,” Tilstra says. “If where we live, work and play has that much influence on our health, we have to make it easy for people to be healthy, which will ultimately change the overall health of the community.”

Now the community transformation officer for CentraCare, Tilstra spends up to 20 hours a week on this work—a surprise even to himself. His latest efforts are with Communities of Excellence, a collaborative initiative with leaders from healthcare, government, education, business and more. It aims to tackle en-

trenched challenges in the St. Cloud area such as access to child-care and housing and income and employment equity. This work can be complicated by the three counties and multiple cities and townships that make up the region.

“Every once in a while, we joke that once we get this done, we'll take on world peace,” Tilstra says. “It takes patience and knowledge and the previous history of seeing that these things do result in change.”

One such avenue to change can be found in Tilstra's long-standing efforts to fight hunger. He serves on the board of Second Harvest Heartland, the largest food bank in the region and home to the nutrition-prescription initiative, FOODRx. Tilstra, his fellow board members and FOODRx's founding team set out to determine whether delivering tailored food prescriptions could improve chronic disease outcomes. The results are in and the answer is yes; FOODRx participants enjoy reduced ER visits and improved lab results. Tilstra finds that his work with Second Harvest Heartland—and knowledge about how much food insecurity impacts health—informs his current efforts with Communities of Excellence.

Some days, he looks in wonder at the direction of his career. Tilstra planned to pursue academic medicine but quickly realized that it wasn't the right fit. He happily worked as a pediatrician and geneticist, eventually adding administrative roles and serving as president of CentraCare Clinic. He still gets fulfillment from working in clinical genetics, diagnosing rare diseases for children and adults and identifying effective treatments. He finds it pairs well with his community efforts.

“Working on these community policies isn't immediately gratifying, like clinic work can be. But when you see those numbers change—and it's on the scale of thousands if not tens of thousands—you know you've done something good for the health of the people in the area,” Tilstra says. “My drive in life is to improve the lives of as many people as I can, and the way to affect the most people is to get into these policies.”



Identity and culture

Maria Veronica Svetaz, MD, MPH

Family medicine and adolescent health physician; medical director of Aquí Para Ti/Here for You Clinic at Hennepin Health; assistant

professor of medicine in the Department of Family Medicine and Community Health at the University of Minnesota Medical School. Faculty, Division of General Pediatrics, Leadership Education in Adolescent Health.

As Maria Veronica Svetaz, MD, likes to say, adolescence happens to families. It's a turbulent time when teens are figuring out who they are and how they fit into their families and communities. Guiding youth through this process can be especially challenging for Min-

nesota's immigrant families, where the culture and society teens encounter often is strikingly different from that of their parents.

A specialist in adolescent health, Svetaz developed a clinical care model and approach for supporting teens, young adults and parents, funded since its inception by EHDI (Eliminating Health Disparities Initiative of MDH). She aims to help them navigate their teens' development in an environment that erects multiple layers of barriers. As they face racism, disparities in access to healthcare, language difficulties and other social determinants of

“We see a need for parents and providers to learn how to coach around self-identity, to affirm the values and the preferences of their culture and to teach youth and children how to spot bias and discrimination.”

—María Veronica Svetaz, MD, MPH

health, Latinx families in Minnesota benefit from support that helps them guide their teens from adolescence to adulthood.

Aqui Para Ti/Here for You clinic, where Svetaz has served as medical director since its founding in 2001, has become a much-lauded method to serve the holistic needs of Latinx teens and parents. The multidisciplinary clinic combines medical care, health education, counseling and support for people ages 11-24. It provides parallel care for youth and their families in a model called familism, which builds trust by balancing privacy for patients and support for families.

“We have been working to create a framework for youth development that is not colorblind and to celebrate cultural, racial and ethnic identity. It's a model of resiliency with an adolescent health and health-equity lens,” Svetaz says. “This should be a model for every teen in any community, and particularly for communities of color. Parents have an increased burden on their shoulders by the social and political determinants of health, and they deserve to be supported and able to approach these issues.”

Now serving her second generation of patients, Svetaz uses her expertise and research to teach others how to bring a health equity lens to any disadvantaged community. She co-edited the 2019 book, *Promoting Health Equity Among Racially and Ethnically Diverse Adolescents*, wrote a chapter about creating clinical models that promote health equity, co-wrote several chapters on resilience for two AAP books, led a position paper for the Society and Adolescent Health and Medicine (SAHM) and helped develop an anti-racism toolkit (<https://www.adolescenthealth.org/Resources/Anti-Racism-Toolkit.aspx>).

“We see a need for parents and providers to learn how to coach around self-identity, to affirm the values and the preferences of

their culture and to teach youth and children how to spot bias and discrimination. It's teaching them that everyone has a value, and your culture and roots are as important as everyone else's,” Svetaz says. These teachings have been especially important in the past five years, she says, with the Muslim ban, police brutality and family separations at the United States/Mexico border being especially traumatic for BIPOC people.

Svetaz is the recent past chair of the Society for Adolescent Health and Medicine Diversity Committee and serves on the Minnesota Medical Association's Health Equity Advisory Board. Svetaz feels the weight of the responsibility of trying to make a difference for Latinx youth, families and other disadvantaged people as a long-time grantee of the EHDI MDH. But she relishes using her skill and experience in public health to eliminate disparities for BIPOC people.

“I'm a witness when they are teens and when they are parents. When you see firsthand what they have to go through and what they achieve—and the same for the parents—I'm so thankful,” Svetaz says. “It's a two-way street. I get more resilient because I see them being resilient. When you see someone growing and see someone making discoveries and sharing them with you, when you see their trust, that is motivating.” **MM**

Suzy Frisch is a Twin Cities freelance writer.

HEALTH PROFESSIONALS FOR A HEALTHY CLIMATE

Climate change is a health emergency, according to a declaration signed by 14 health-based and health-professional organizations. The “Minnesota Declaration on Climate Change and Health” was presented at a joint hearing of two Minnesota House committees in January.

The declaration outlines health impacts of climate change, including:

- Enhanced conditions for ozone and particulate air pollutions, linked to asthma attacks, cardiovascular disease and premature death.
- Extreme weather patterns, such as heat and severe storms, destabilizing communities, increase economic stress and poverty, reduce access to healthcare and increase risk for mental health concerns.
- Wildfires and wildfire smoke that spreads for thousands of miles.
- Increased vector-borne diseases as seasons and the geographic ranges for ticks, mosquitos and other disease-carrying insects change.
- Longer and more intense allergy seasons.

“While all Minnesotans are impacted by climate change, communities of color and low-income communities disproportionately bear the health impacts of climate change because of generations of discriminatory policies that have led to underlying health and economic inequities,” says Sarah Traxler, MD, president of Twin Cities Medical Society, a component medical society of the Minnesota Medical Association.

ADDRESSING QUALITY OF LIFE

We can do better with goals-of-care discussions

BY BRYAN J. NETH, MD, PHD

As physicians, we are trained from Day One of medical school to do everything in our power to treat pathology and extend life. It's automatic. If a patient's blood pressure is high—ACE inhibitor, ARB, calcium channel blocker or diuretic. If a patient's feet tingle—Gabapentin, Pregabalin or Duloxetine. If a patient's mood is low—pick your favorite SSRI, SNRI or, if they are not eating and sleeping well, then Mirtazapine. This is done with good intent of course. Our driving purpose is to make people better. But what if this is not what the patient desires?

As an intern, I cared for a patient in the medical intensive care unit (ICU) who is a very caring and compassionate mother, grandmother and great-grandmother. She also was diagnosed with multisystem

atrophy about three years prior to presentation. Sadly, given the nature of the disease, she became gastric tube-dependent with her dysphagia and produced copious secretions as she was unable to coordinate the swallowing of saliva. This led to frequent aspiration, mucous plugging and recurrent hospitalizations for respiratory failure. She was unable to vocalize and was dependent on pointing to a letterboard for communication. She has a very supportive family; I saw at least seven different family members who were in the ICU around the clock to provide comfort.

Throughout her weeks in the hospital, she was in and out of the ICU several times given recurrent difficulties with secretion management and hypoxia not resolved by nasotracheal suctioning. It be-

came apparent that she was exhausted. Her facial expressions and interactions with team members markedly changed in the weeks after I first met her. Several teams had discussions about the inevitable—a tracheostomy—to help better manage secretions and mucous plugs. This is not a trivial decision. After the third documented goals-of-care discussion, she decided that she wanted to focus on spending quality time with family rather than to keep returning to the hospital for evaluation and procedures she didn't want.

In the months following my time caring for her, I continued to reflect on why it was so challenging to hold a care conference or to bring up her inevitable fate because of her condition?

First, both she and her family had a limited understanding of her progressive neurodegenerative disorder. After looking through the medical records, the diagnosing neurologist documented a detailed conversation of her diagnosis, expected course of treatment and complications. Given her advanced stage at diagnosis, he held a discussion about how to prepare for the end of life. Despite this meeting and additional conversations, I still believe that she and her family had a poor understanding of the disease.

Second, she had many family members who may have influenced her push into continued medical care. This became clear during several goals-of-care conversations that I helped lead. One morning after

as prominent barriers. What can we do to help patients prepare for the inevitable challenges they will face at the end of life? How can we improve patient and family understanding of their diagnosis and ultimate prognosis?

It starts with our training and communication skills. Many physicians are not proficient in leading goals-of-care discussions after medical school or even residency. Importantly, trainees may not have adequate formal education about addressing advance-care planning. Are we born with the ability to hold difficult conversations and carefully dissect the interpersonal relationships, past history, desires and ambitions of any patient we meet? I hope we will place more emphasis

Are we born with the ability to hold difficult conversations and carefully dissect the interpersonal relationships, past history, desires and ambitions of any patient we meet? I hope we will place more emphasis on these interactions earlier in training, even if we are just present in conferences to observe.

rounds, I sat down with her to discuss tracheostomy. I made sure she understood her current state, the likely continued respiratory complications and details of the tracheostomy procedure. I gave her time to ask questions, watching patiently as she spelled words by pointing to each letter on her board. After confirming that she didn't want further invasive care, I remember the disbelief in the faces of her family. "Why would mom and grandma not want to continue with medical care? Why would she just want to die?" The tension was palpable.

There are common obstacles regarding meaningful goals-of-care discussions. A team of investigators surveyed more than 1,200 clinicians who reported difficulty in accepting prognosis, understanding expected disease complications/course and disagreement among family members

on these interactions earlier in training, even if we are just present in conferences to observe. It is always difficult to tell someone they are going to die and to talk to an estranged father and daughter about their loved one's limited hope for recovery, exchanges that are unavoidable in clinical practice.

From patients with large intracerebral hemorrhages with resultant mass effect, to those with rapidly progressive central nervous system lymphoma or prion disease, one constant remains in medicine: we cannot fully predict health and disease. Why do 38-year-old athletes have amyotrophic lateral sclerosis and why don't 91-year-old smokers have cancer or myocardial infarctions? We don't know. Because of this, we must have meaningful, difficult, and heart-wrenching discussions sooner rather than later. The perfect time for these con-

versations is in times of health, not at the end of life, where needless suffering may be inevitable.

We can help patients take a survey of their lives. Reflection points include: What makes you happy? What is quality of life for you? Describe an acceptable day in your life when faced with terminal disease. Helping patients reflect on their desires is part of quality care and will make future healthcare teams ready for the challenges a patient will face. Tinetti, Naik, and Dodson have reported on one such patient value-based care approach that may be utilized.

Several books (*That Good Night: Life and Medicine in the Eleventh Hour* by Sunita Puri, *Being Mortal* by Atul Gawande) and websites (<https://www.vitaltalk.org>, <http://palliative.stanford.edu>) can help improve awareness and education on these essential issues. Advance-care planning visits are reimbursable in the United States and can be coordinated through primary care and palliative medicine physicians. I hope increased awareness and time spent on end-of-life discussions will provide future patients with the closure and dignity they deserve. **MM**

Bryan J. Neth, MD, PhD, is a resident in Neurology, Department of Neurology, Mayo Clinic.

I would like to acknowledge all the patients who have helped make me a better physician.

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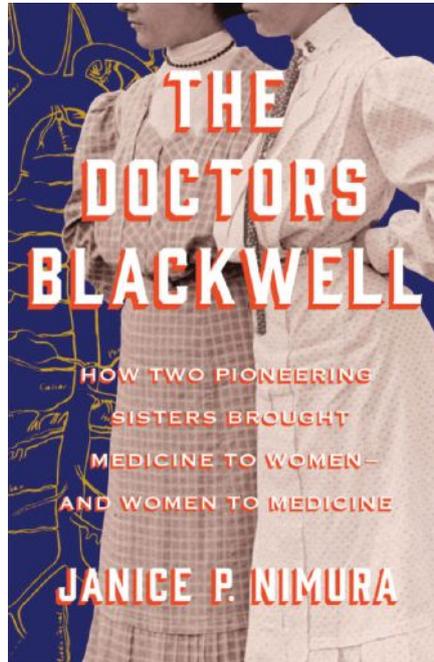
ELIZABETH AND EMILY BLACKWELL

How two 19th century sisters made their own way in an all-male medical profession

BY CHARLES R. MEYER, MD

My first lecture in medical school was quite a shock—not because of the intricacies of the human body discussed or the frightful prospect of the four years to follow, but because I was sitting next to a woman. Having survived four years at an all-male college that finally achieved co-ed enlightenment in my senior year, females at school seemed a jolting but pleasant oddity. Little did I realize how historically relevant my reaction was. Women’s entry into the medical profession was a slow, sometimes tortured slog featuring male and societal resistance, rude and recalcitrant, that yielded only to the insistent persistence of champions like Elizabeth Blackwell, the first woman to graduate from an American medical school. Her remarkable saga, along with that of her physician sister Emily, is told in Janice P. Nimura’s recent book, *The Doctors Blackwell: How Two Pioneering Sisters Brought Medicine to Women and Women to Medicine*.

Arriving in America with her Bristol-born family in 1832, Elizabeth met a society and medical community with a narrow vision of what women could and should do, causing her to complain shortly after experiencing Cincinnati: “I wish I could devise some good way of maintaining myself but the restrictions which confine my dear sex render all my aspirations useless.” Yet she doggedly followed her aspirations, unsuccessfully applying to multiple medical schools and receiving rejections that expressed “outrage” at the idea of a female physician. She finally was admitted to Geneva Medical College after its dean asked the all-male class to vote on her application. The dean soon found that a “classroom full of lawless desperados had been transformed into models of deportment” by the mere presence of a bright female. Undiscouraged by one writer who labeled



The Doctors Blackwell: How Two Pioneering Sisters Brought Medicine to Women and Women to Medicine
By Janice P. Nimura
Published 2020 by W.W.Norton

her entry into the medical profession a “perversion of the laws of her Maker,” Blackwell headed for Paris following her graduation in 1849 to learn obstetrics at La Maternité, a hospital for indigent mothers. Meanwhile, her younger sister Emily endured a similar application gauntlet, first accepting a position at Bellevue Hospital then at Rush Medical College and eventually transferring to Cleveland Medical College when the Rush board decided she couldn’t finish her degree there.

Emily and Elizabeth then crossed paths over the Atlantic, Emily to study in Edinburgh, Elizabeth to open a “dispensary” for poor women in Manhattan. After Emily returned to the United States, she joined Elizabeth and became the chief clinician and surgeon at the dispensary while Elizabeth administered and taught. The dispensary expanded its mission with the 1869 founding of the Woman’s Medical College

of New York, which Emily ran until it closed in 1899. It was taken over by Cornell Medical College, which reluctantly agreed to admit women.

Lifelong single women from pious Dissenter roots who each adopted and raised a child and chose the same profession, the Blackwell sisters eventually diverged in their professional interests. After shepherding the formation of the Women’s College, Elizabeth decided to return to her English roots where she devoted her time to prevention. She founded the National Health Society that promoted “sanitary practice,” which included the elimination of venereal disease through children learning “chastity at their mother’s knee.” Emily soldiered on in the practice of women’s medicine in New York.

Surprisingly, neither of these champions of women’s advancement embraced the suffrage movement. Indeed, Elizabeth condescendingly viewed women not as peers or equals but as objects toward which she could exert her “divine gifts” and guide them to a better version of themselves.

Peppered with extensive quotations from both sisters that highlight their distinctive personalities, Nimura’s account is a captivating look at two lives intersecting with and challenging late 19th century medical practice.

Seven years after my medical school indoctrination, I started practice. With medical school classes approaching gender parity, more women graced the medical profession in 1977, but the doctors’ lounges still felt like a men’s club. The glass ceiling of medicine was still slowly cracking 128 years after Elizabeth Blackwell’s graduation. **MM**

Charles R. Meyer, MD, is former executive editor of *Minnesota Medicine*.

Budget negotiations continued into special session

While the governor and legislative leaders reached a preliminary agreement on a budget outline near the end of the regular legislative session, it took a special session in June to continue negotiations on specifics. As this issue of Minnesota Medicine went to press, they were still working on final numbers.

Two major MMA priorities included in the budget bills are expanded coverage for telehealth and limits on formulary changes by insurance companies. There is strong bipartisan support for continuing coverage for telehealth and telephone services, but they have not agreed on how to pay for the coverage or for how long it should be continued.

The MMA has been pushing to limit the ability of insurers and pharmacy benefit managers (PBMs) to change an enrollee's drug coverage during the contract year. This provision is included in the House budget bill, but not the Senate version.

We will have a full report on the legislative and special sessions in the next issue.

The MMA and AMA joined together to explain to the Eighth Circuit Court of Appeals the significant public health implications that revoking the moratorium would have on communities in Minnesota. An estimated 30 percent of Minnesota renters were already at risk of eviction at the start of the public health emergency.

The MMA has identified access to housing as a top public health priority and will continue to advocate for equal and safe access to housing for all Minnesotans. In a time when the public is encouraged to help prevent the spread by social distancing and self-quarantining, the MMA believes individuals cannot be evicted and forced into overcrowded shelters or residences. Eviction moratoria, such as the one at issue in this case, are essential to continue stemming the spread of COVID-19.

MMA and MHA urge MN Supreme Court to review medical malpractice case

This past April, the MMA, in partnership with the Minnesota Hospital Association, submitted a brief urging the Minnesota Supreme Court to review a Court of Appeals ruling in a 2019 medical malpractice case.

Throughout the summer of 2015, a Park Nicollet patient was being treated on an outpatient basis for major depression and anxiety. The patient killed his family and then committed suicide. The patient's next-of-kin sued Park Nicollet, claiming that these violent acts could have been foreseeable by the healthcare providers, even though the patient had no history of prior violence.

The Court of Appeals said the treating physician could have foreseen the violent acts because they prescribed a medication that had a black-box warning of violence and aggression.

With the Supreme Court agreeing to review the case, the MMA and MHA will participate as amicus curiae, or friends of the court, by submitting a brief explaining how this expansion of liability would negatively impact the mental health system in Minnesota. The MMA and MHA are concerned about the burden this ruling places on providers regarding warning third parties of a patient's unforeseeable violent behavior.

Look for updates in our weekly newsletter, *MMA News Now*.

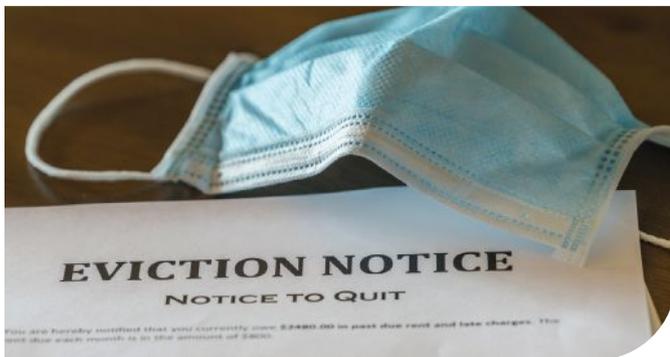
Health spending accounts for nearly one-fifth of U.S. gross domestic product

Health spending accounted for 17.7 percent of the U.S. gross domestic product (GDP) in 2019 and increased by 4.6 percent to \$3.8 trillion, according to a new report released in May by the AMA.

The new report gives a detailed look at the official U.S. health-care spending estimates through 2019, using data from the Centers for Medicare and Medicaid Services (CMS). It also presents preliminary estimates of 2020 health spending from Altarum, a private research organization that focuses on health policy.

Find the report here: www.ama-assn.org/system/files/2021-05/prp-annual-spending-2019.pdf.

News Briefs



MMA to provide amicus brief on Minnesota eviction case

In late May, the MMA joined with the AMA Litigation Center to submit an amicus brief in support of Gov. Tim Walz's eviction moratorium that has been in effect during the COVID-19 peacetime emergency.

In response to the growing public health concern caused by the pandemic, Walz issued an Executive Order (EO) preventing landlords from evicting tenants during the public health emergency, except under limited circumstances. The EO came at a time when the COVID-19 pandemic had been greatly exacerbating housing shortages and inequities. Many renters have been unable to make rent payments due to widespread unemployment created by the pandemic and have been at risk of eviction, which poses a significant public health risk.

Heights Apartments challenged the governor's moratorium, arguing that the order is unconstitutional, but a Minnesota District Court disagreed. Heights Apartments has appealed the decision.

Suicide rate in Minnesota decreases for first time in two decades

For the first time in 20 years, the number of suicides in Minnesota did not increase in 2020, according to a Minnesota Department of Health (MDH) report released in mid-May.

MDH's new Minnesota Suicide Mortality, Preliminary 2020 Report shows that 723 Minnesotans died by suicide, a decrease from 830 in 2019, which was a record number.

For the past 20 years, the number of suicides in Minnesota has steadily increased, mirroring patterns across the United States. In fact, 2020 marks the sixth straight year in which more than 700 Minnesotans died by suicide.

"We are not yet sure what impacts the COVID-19 pandemic had on this trend, but it is clear that we must continue to support people and communities to address the causes of suicide," says Health Commissioner Jan Malcolm.

Death by suicide has been one of several reasons why overall life expectancy in the United States may be declining. Other factors include alcohol-attributable deaths and drug overdose deaths. Although suicides declined in 2020, both alcohol-attributable deaths and drug overdose deaths increased in 2020. All three have been increasing since 2000.

"2020 was a year of extraordinary challenges, and the impact to Minnesotans is one we will need to explore on a deeper level," says Stefan Gingerich, a suicide epidemiologist with MDH. "While we are encouraged by the reduction in deaths by suicide this past year, given the high number of suicides each year, we must remain vigilant and proactive in our prevention efforts."

The National Suicide Prevention Lifeline provides free and confidential emotional support to people in suicidal crisis or emotional distress, 24 hours a day, seven days a week. To speak with a certified listener, anytime, any day, call 1-800-273-8255.

For more resources, visit the MMA website at www.mnmed.org/resources/MMA-Practice-Well-Collaboratory/I-need-help.

Medical cannabis program allowing petitions for new qualifying conditions

The Minnesota Department of Health's (MDH) Office of Medical Cannabis is accepting petitions through July 31 to add qualifying medical conditions or delivery methods to its Minnesota Medical Cannabis Program.

In response to a petition submitted in 2020, MDH is reviewing anxiety as a possible new qualifying medical condition in 2021. No additional petitions for anxiety are necessary.

Process details include:

- Limit your petition to one proposed qualifying medical condition or delivery method. Any petition that includes more than one will be dismissed.
- If you are petitioning for the addition of a medical condition or delivery method that was considered but not approved in a previous year's petition process, you must include new scientific evidence or research to support your petition. Otherwise, your petition will not be considered.

- MDH does not have authority to add plant material or smoking as delivery methods. Petitions covering those delivery methods will be dismissed without being considered.
- You can withdraw your petition any time before the Medical Cannabis Review Panel's first public meeting. Provide a written statement to the Office of Medical Cannabis stating your request.

State drug overdose death rate grows in 2020

In early May, the Minnesota Department of Health (MDH) reported an increase of 27 percent in drug overdose deaths (729 to 1,008) from 2019 to 2020. The trend shows each month in 2020 had a higher number of overdose deaths than the same month the year before.

Preliminary data show a 59 percent increase from 2019 to 2020 for all opioid-involved deaths among Minnesota residents (412 to 654). Deaths involving synthetic opioids, including fentanyl and fentanyl analogues, increased 81 percent (298 to 539), and were involved in 82 percent of all opioid-involved deaths.

Deaths involving commonly prescribed opioids, such as hydrocodone (Vicodin), oxycodone (Percocet), morphine and methadone, increased 53 percent (135 to 207). Deaths involving heroin increased 15 percent (102 to 117 deaths). The increase in deaths from substances of commonly prescribed opioids is a reversal of recent progress, where these deaths declined in both 2018 and 2019.

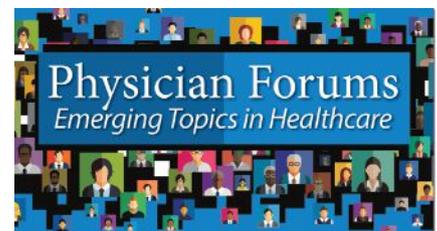
"Minnesota families are struggling, and the overdose deaths in 2020 are a terrible reminder that those struggles can result in preventable deaths," says Minnesota Commissioner of Health Jan Malcolm. "The year has been unprecedented in so many ways, and the staggering number of drug overdose deaths shows the need to amplify our prevention efforts and strengthen the ability of communities to support people and connect them with services."

Preliminary data also show a large increase in deaths involving non-opioids from 2019 to 2020. Psychostimulant-involved deaths, which includes methamphetamine, increased 44 percent, (229 to 329), deaths involving benzodiazepines increased 70 percent (83 to 141) and deaths involving cocaine increased 41 percent (58 to 82).

Noon Physician Forum recordings available online

If you are unable to attend a physician forum you're interested in, you can access the

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FROM THE CEO

Our advocacy work always continues

As this issue of *Minnesota Medicine* heads to press, the 2021 legislative session and MMA's primary legislative priority—to preserve pandemic-expanded telehealth coverage and payment policies—remain unresolved. Nevertheless, we are optimistic about a good outcome.

Legislative advocacy is among the MMA's most visible, highly valued and important work. The decisions made in St. Paul ripple throughout medicine. Just consider the fact that health and human services spending comprises nearly

30 percent of the state budget and 17 percent of Minnesotans have Medical Assistance or MinnesotaCare insurance coverage. Legislative proposals that directly or indirectly (good and bad) impact the health of individuals and communities will continue to be made. It is, therefore, no surprise that medicine's visibility and unified voice are more important than ever. Through strong partnerships and collaboration with state specialty societies, the MMA is uniquely positioned to distill and amplify the voice of the medical profession at the Capitol.

Yet MMA's advocacy work extends beyond the halls of the Capitol. One of the less visible but critical advocacy arenas in which MMA works is the courts. Primarily through the submission of amicus briefs, the MMA represents the interests of the medical profession in key cases. In many instances, we can increase our impact by submitting briefs in partnership with the AMA.

Within the past year alone, the MMA has weighed in on three important cases that illustrate how the breadth of our advocacy works to advance the MMA's mission—to make Minnesota the healthiest state and the best place to practice.

In late 2020, we continued our efforts to protect the public from the harms of tobacco. In a challenge to Edina's ordinance prohibiting the sale of flavored tobacco products (*RJ Reynolds v. City of Edina*), the MMA joined with others to support the long-standing precedent that a local government can regulate the sale of tobacco products to protect their communities and explained that Edina's ordinance is not a "product standard" subject to preemption by the Tobacco Control Act.

In 2021, the MMA supported the constitutionality of the state's COVID-19 eviction moratorium and urged the court to acknowledge the importance of safe

and stable housing for overall health, particularly during a pandemic (*Heights Apartments, LLC and Walnut Trails, LLLP v. Tim Walz and Keith Ellison*).

And in a brief before the Minnesota Supreme Court, the MMA, in partnership with the Minnesota Hospital Association, cautioned that mental health care in Minnesota could be negatively impacted if physicians and other mental health providers can be held legally responsible for the behavior of any patient for whom they prescribe medications containing a black box warning (*David Smits, as Trustee for the Next of Kin for Brian Short, et al., v. Park Nicollet Health Services, et al.*).

Thanks to your continued support, the MMA's advocacy work continues. **MM**

Janet Silversmith
JSilversmith@mnmed.org

VIEWPOINT

Our children are suffering; they need our help

The pandemic-related children's mental health crisis is making the national news. As a pediatrician and advocate for children's issues, I am generally pleased to see the too-often overlooked needs of our children and youth making the headlines, but not this time.

Pediatricians, family medicine physicians, child psychiatrists, emergency physicians and others whose practice includes children can testify that our youth are showing up with depression and anxiety and with suicidal ideation and attempts in numbers far higher than before the pandemic.

The Centers for Disease Control and Prevention (CDC) reported that across the country the proportion of mental health-related emergency department visits April to October 2020 was higher than in 2019. Visits increased 24 percent in 5- to 11-year-olds, 31 percent in 1- to 17-year-olds.

As with other consequences of the pandemic, children in Black, Indigenous, Latinx, Asian and Pacific Islander communities have suffered disproportionately. Black and Hispanic youth are far less likely to receive services for mental health and substance use disorders, despite having roughly similar rates as the general population.

Many factors contribute to this alarming situation. Nearly 40,000 children have lost at least one parent during the pandemic, with 20 percent of those children in Black families, despite Blacks making up 14 percent of the childhood population. Numerous studies have demonstrated negative effects of distance and hybrid learning on children's ability to be outdoors, be physically active and to remain mentally and emotionally healthy. Children with more severe trauma—such as a death or severe illness in the family, financial stress and poverty, racial inequity or housing in-

stability—are more at risk. Previous mental health concerns also increase the risk, as does lack of social support. Rural youth have less access to all health services.

Our own state had pre-pandemic rates of suicide for adolescents and young adults higher than the national average, carrying the dubious distinction of it being the second leading cause of death for young people ages 10-24, per Minnesota Department of Health statistics. The highest rates are seen in the American Indian population, again demonstrating racial and ethnic disparities. LGBTQ youth are at increased risk. As with adults, firearms lead the methods of death by suicide, with poisoning and cutting the most used methods of non-fatal self-inflicted injury.

It is far past time to address the mental health crisis sweeping over our children. The inadequate pre-pandemic mental health infrastructure is not capable of absorbing the increased needs brought on by the pandemic. Our leaders, policy makers and profession, and society as a whole, have increased awareness of the disconnect between mental health needs and available resources, thanks to the unmasking effects of the COVID-19 pandemic. Here are just a few examples of how physicians can help:

- Ask children during health supervision visits about pandemic-related experiences, reflectively listen and normalize their feelings as appropriate, and assess the severity of their distress.
- Make sure universal mental health screening is part of your practice.
- Address adverse childhood experiences when they exist.
- Support universal suicide screening, mental health service delivery and increased school counselor-to-student ratios in schools.
- Counsel on lethal means restriction when appropriate.
- Be aware of the need for culturally relevant mental health care.
- Keep the health equity lens front and center when advocating for increased mental health resources in schools and health care. MM



Marilyn Peitso, MD
MMA President

PHOTO BY KATHRYN FORBES

Black and Hispanic youth are far less likely to receive services for mental health and substance use disorders, despite having roughly similar rates as the general population.

Retrospective SARS-CoV-2 real-time PCR testing of stored bronchoalveolar lavage samples from February 2020

BY DOUGLAS CHALLENGER, MD; ADITYA SHAH, MBBS; MATTHEW BINNICKER, PHD; ANDREW BADLEY, MD; AND JOHN O'HORO, MD, MPH

Bronchoalveolar lavage samples (n=34) collected in February 2020 prior to the wide availability of molecular testing for SARS-CoV-2 were retrospectively assayed for presence of viral RNA. None of these patients qualified for SARS-CoV-2 testing based on Centers for Disease Control criteria at the time. None of the samples tested positive for SARS-CoV-2, suggesting that the virus was not yet widespread in Minnesota at the time these samples were obtained.

Introduction

As the global COVID-19 pandemic progresses, there is increasing interest in determining whether SARS-CoV-2 was circulating prior to the availability of widespread testing. Testing for COVID-19 in the United States was initially very limited, and early testing guidelines from the Centers for Disease Control and Prevention (CDC) recommended testing only patients with symptoms. However, it is now known that there are a significant proportion of people who are infected but remain asymptomatic.¹ This has led to concern that early cases of COVID-19 may have been missed, and that the virus might have been circulating throughout the country prior to the first reported cases.

The timing of the arrival of SARS-CoV-2 in the United States remains unclear. The first case in the United States was detected in Washington State on January 20, 2020 in a 35-year-old who had recently travelled to visit family in Wuhan, China.² Retrospective testing of influenza-swabs collected between January and March 2020 from 3,524 participants in the Seattle, Washington region revealed a positive sample that had been obtained on February 24, 2020.³ Detection of community transmission of SARS-2-CoV in the United States at the end of February prompted the CDC to expand testing criteria, previously limited to only those

with recent travel to Wuhan City, China, or close contact with a laboratory-proven case or patient under investigation (PUI).⁴ The first known death in the United States from COVID-19 was on February 6, 2020 in a patient with no known risk factors for exposure in Santa Clara County, California. This suggests that there was community spread of the virus in Northern California in late January, 2020.^{5,6}

This study assessed whether SARS-CoV-2 was circulating in the upper Midwest prior to the initiation of broad testing for the virus. To address this question, stored lower respiratory tract specimens collected at Mayo Clinic in Rochester, Minnesota, in February 2020 were identi-

fied and tested for SARS-CoV-2 RNA using an emergency use authorized (EUA) real-time PCR assay.

Methods

All bronchoalveolar lavage (BAL) samples (n=34) collected from intensive care units at Mayo Clinic, Rochester during the month of February 2020 were stored frozen at -20°C and tested by a real-time reverse transcriptase (RT)-PCR to detect SARS-CoV-2 RNA. Viral RNA was extracted from these samples using the bioMérieux easyMAG/eMAG, with subsequent PCR amplification on the Roche LightCycler 480. The assay targets two gene regions within SARS-CoV-2; the open reading frame (Orf1ab) and nucleocapsid protein (N) genes.⁷ This method has received emergency use authorization (EUA) from the Food and Drug Administration and was validated for testing of BAL samples.

A physician reviewed the electronic medical record to obtain the original indication for the BAL. The clinical indications for the procedure were categorized into acute (<4 weeks) and chronic symptoms (>4 weeks). We also determined if the patient met clinical criteria for suspected COVID-19 (based on the CDC surveillance case definition approved on April 5, 2020) at the time of their procedure as well as their final diagnosis. Descriptive statis-

TABLE 1

Final Clinical Diagnosis Following Bronchoalveolar Lavage

DIAGNOSTIC CATEGORY	NUMBER (N=34)
Fungal infection	5
Viral infection	4
Bacterial infection	7
Mycobacterial infection	2
Autoimmune	4
Hypersensitivity Pneumonitis	2
Anatomical abnormality	1
Malignancy	1
Other or Unknown	6

tics of the cohort were generated with JMP Pro 14 (SAS Institute Inc., Cary, N). This study was approved by the institutional review board at our center.

Results

Stored BAL samples from 34 patients were evaluated for SARS-CoV-2 RNA. Of these patients, 23 (67%) of the patients were residents of Minnesota and 18 (53%) were male. The samples were collected between February 6, 2020, and February 20, 2020. Twenty-three (67%) samples were collected while the patient was admitted to the hospital and the rest were obtained in the outpatient setting. Twenty-one (62%) of the samples were obtained to evaluate for an acute respiratory process, while 4 (12%) samples were from patients in whom infection was not being considered as part of the differential diagnosis. These were samples collected on an inpatient (n = 23) and outpatient (n = 11) basis for a variety of indications including respiratory failure (mainly in an inpatient setting) and evaluation of chronic lung imaging abnormalities (mainly in an outpatient setting). Six of the patients met clinical case definition criteria for suspected COVID-19. Eighteen patients were diagnosed with an infection (Table 1). All 34 samples tested negative for SARS-CoV-2 RNA via PCR.

Discussion

In our study, there was no evidence of SARS-CoV-2 RNA in the 34 stored BAL samples that were obtained in February 2020. This suggests that there was not widespread community circulation of SARS-CoV-2 in Rochester, Minnesota, prior to the availability of widespread testing. Multiple previous studies have evaluated stored nasopharyngeal swabs originally performed for evaluation of influenza; however, none have evaluated stored lower respiratory tract samples. Lower respiratory tract samples such as bronchoalveolar lavage may be more sensitive than samples from the upper respiratory tract.⁸ This cohort also represents patients who were more ill than previous prevalence studies with most being hos-

pitalized at the time of their sample collection.

This study is limited by its small sample size. It does not prove the absence of circulating SARS-CoV-2 in Rochester in February 2020 and it is possible that there were asymptomatic individuals with COVID-19 who were not tested. Additionally, it is likely that not all patients with respiratory failure underwent bronchoscopy with lower respiratory tract sampling. Despite the limited sample size, the lack of any positive tests is useful as further work is performed to characterize the initial stages of the COVID pandemic in the United States. **MM**

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Paraneoplastic cerebellar degeneration in Merkel cell carcinoma with unknown primary and subsequent complete spontaneous regression

BY MACKENZIE MAKI, MD; JETTER ROBERTSON, DO; EVIDIO DOMINGO-MUSIBAY, MD; AND JANE YUET CHING HUI, MD, MS

The incidence of Merkel cell carcinoma (MCC), a primary cutaneous neuroendocrine tumor characterized by high rates of local recurrence and nodal metastasis, is steadily increasing. It has been associated with paraneoplastic syndromes, and clinical presentation cerebellar degeneration has been reported only rarely. Here we discuss a 59-year-old male who presented with a right inguinofemoral mass that subsequent biopsy confirmed as Merkel cell carcinoma with unknown primary. After biopsy, the patient developed gait ataxia, diplopia, oscillopsia, dysarthria, and loss of right-hand dexterity. Magnetic resonance imaging of the brain was normal and a paraneoplastic panel was negative. His clinical presentation was consistent with paraneoplastic cerebellar degeneration (PCD). Intravenous methylprednisolone led to mild symptom improvement; a lymphadenectomy was performed for definitive treatment. Final pathology showed complete spontaneous regression of MCC with no evidence of disease in the lymph nodes, including in the node that was previously biopsied. Seven months after initial presentation, the patient continued to have difficulty ambulating independently and he had near-baseline speech and vision. There was no evidence of recurrent disease on follow-up. This is the first reported case of PCD with MCC and subsequent complete spontaneous regression. The case highlights the importance of considering paraneoplastic syndrome on the differential and serves as a reminder that a negative paraneoplastic panel does not rule out the diagnosis. Prompt diagnosis and treatment of PCD is critical. Our review also suggests a correlation between Merkel cell carcinoma with unknown primary and paraneoplastic cerebellar degeneration.

Introduction

Merkel cell carcinoma (MCC) is a rare primary cutaneous neuroendocrine tumor characterized by high rates of local recurrence and nodal metastasis. The incidence of MCC has been steadily increasing across all stages according to data from 2006-2015, particularly in older adults (age >70).¹ The 5-year survival rate is 55.1% for men and 67.7% for women, and survival rate decreases with later stage and older age at diagnosis.¹ MCC typically occurs in sun-exposed areas, most commonly on the head and neck, and typically affects elderly White males. Development of MCC has

been associated with immunosuppression, ultraviolet exposure, and infectivity with Merkel cell polyomavirus; immunosuppression is a poor prognostic factor.² Treatment depends on the stage of disease. Management includes surgical excision, radiation therapy, immunotherapy, and chemotherapy.

MCC has been reported to cause paraneoplastic syndromes (PNS), including cerebellar degeneration, Lambert-Eaton myasthenia syndrome, encephalomyelitis, and hyponatremia. Only six case reports describe paraneoplastic cerebellar degeneration (PCD) due to MCC; notably, the

majority of the cases have an unknown primary tumor (UPMCC).

We present a case of nodal MCC with unknown primary with PCD and subsequent spontaneous regression following biopsy. This case highlights the importance of considering a paraneoplastic syndrome on the differential and our review of known cases indicates a correlation between UPMCC and PCD.

Case description

A 59-year-old white male presented with a mildly tender, mobile, 2-3 cm right inguinal mass that he first noticed three months ago. His medical history included type 2

diabetes, hypogonadotropic hypogonadism, hypothyroidism, hyperlipidemia, hypertension, obstructive sleep apnea, depression, and anxiety. His medication list was most notable for testosterone therapy (150 mg IM every 2 weeks). He had no personal or family history of malignancy. He worked as a supervisor in painting with frequent exposure to the sun and did not use sunscreen regularly. He was a former smoker with 15 pack years, but quit smoking 11 years prior to presentation.

On further workup, a core needle biopsy of the mass showed high-grade metastatic neuroendocrine

FIGURE 1

PET and CT prior to resection, histological slides of the initial biopsy showing Merkel cell carcinoma, and final pathology histological slides.

PET/CT of the palpable right inguinal lymph node, with maximal Standardized Uptake Value 6.3 (panel A), and the corresponding CT (panel B). Histology of the right inguinal lymph node core needle biopsy at 200x magnification with hematoxylin and eosin staining (panel C), and with immunohistochemistry staining for cytokeratin 20 showing diffusely positive staining with perinuclear positivity (panel D). Histology of the same right inguinal lymph node after resection at 40x magnification with hematoxylin and eosin staining (panel E) and negative immunohistochemistry staining for cytokeratin 20 (panel F), demonstrating a sclerotic lymph node without Merkel cell carcinoma. R = right; L = left.

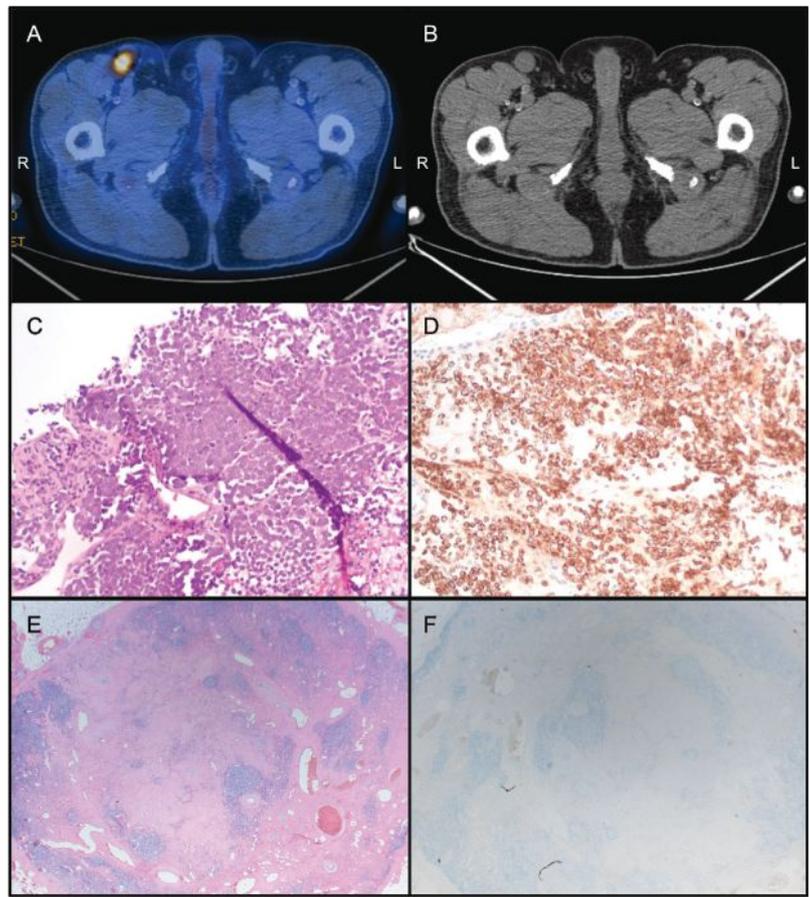


TABLE 1

Published cases of paraneoplastic cerebellar degeneration and Merkel cell carcinoma.

STUDY	AGE, SEX	ANTIBODY	SITE(S) OF MERKEL CELL CARCINOMA	NEUROLOGIC SYMPTOM ONSET IN RELATION TO BIOPSY	COURSE OF TREATMENT AND EFFECT ON NEUROLOGIC SYMPTOMS	FOLLOW-UP TIME AND STATUS AT FOLLOW-UP
Balegno et al. 2005 ⁴	NA	“New atypical antibody”	NA	NA	NA	NA
Zhang et al. 2014 ⁵	50, M	VGCC antibodies	Unknown primary; L inguinal node	Symptoms prior to biopsy	Lymphadenectomy; IVIG ^a ; rituximab with mild symptom improvement	3 months; alive with no disease
Iyer et al. 2016 ⁶	63, M	Negative in serum and CSF	Unknown primary; R iliofemoral node	Symptoms prior to biopsy	Lymphadenectomy and adjuvant RT ^b with symptom improvement	86 months; alive with no disease
Pavolucci et al. 2017 ^{7,c}	67, M	VGCC antibodies	Unknown primary; L axillary node	Symptoms prior to biopsy	Steroids, excisional biopsy, cisplatin and etoposide; worsening LEMS ^d 8 months after onset; trial of 3,4 diaminopyridine; IVIG with mild symptom improvement	12 months; alive with no disease
Sharobeam et al. 2017 ⁸	85, M	Anti-Hu antibodies	Primary on L ankle; PCD ^e with recurrence in L inguinofemoral node and cecum	Symptoms 1 year after resection of the primary MCC ^f	Steroids and RT to iliac nodes and small bowel with symptom improvement; then worsened symptoms; monthly steroids	2 months; unclear
Queen et al. 2019 ⁹	55, M	Calcium channel P/Q antibodies	Unknown primary; L inguinal node	Symptoms prior to biopsy	Lymphadenectomy with symptom improvement; worsened symptoms prior to adjuvant RT; symptom improvement after RT	Subsequent weeks; alive with no disease

^aIVIG = intravenous immunoglobulin

^bRT = radiation therapy

^cThe patient in this case developed both paraneoplastic cerebellar degeneration and Lambert-Eaton myasthenic syndrome

^dLEMS = Lambert-Eaton myasthenic syndrome

^ePCD = paraneoplastic cerebellar degeneration

^fMCC = merkel cell carcinoma

R = right; L = left

carcinoma consistent with MCC. A complete skin exam was negative for primary cutaneous disease. A positron emission tomography scan two weeks after biopsy showed isolated increased fluorine-18-fluorodeoxyglucose uptake in the biopsied right inguinal lymph node (**Figure 1**). Four weeks after the biopsy, he reported 7-10 days of nausea, vomiting, vertigo, and dizziness following a colonoscopy performed with sedation, which was initially treated with antiemetics and discontinuing metformin. Symptoms progressively worsened with development of ataxic gait requiring use of a walker, diplopia with left lateral gaze, oscillopsia, dysarthria, and loss of right-hand dexterity. On exam, he had vertical and torsional nystagmus of both eyes on far-left gaze, bilateral upper extremity dysmetria, and wide-based, ataxic gait. His strength, tone, and reflexes were normal. Magnetic resonance imaging (MRI) of the brain one week after onset of neurologic symptoms was unremarkable except for mild sequela of small vessel ischemic disease.

The initial leading diagnosis was an acute cerebrovascular event due to his age group and risk factors. However, a negative brain MRI along with subacute clinical presentation ruled this out. Hyperviscosity syndrome was also considered due to polycythemia identified during his work-up, presumably secondary to testosterone use; this was deemed unlikely due to lack of improvement with phlebotomy and normal viscosity index. Other etiologic possibilities included metabolic, autoimmune, infectious, hematologic, and metastatic causes. Additional labs ruled out myeloproliferative disease, vitamin deficiencies (B1, E), Miller Fischer syndrome, Lyme disease, viral hepatitis, and myasthenia gravis. Anti-thyroid peroxidase antibody was elevated at 287 IU/mL (normal <37 IU/mL), but this was felt to be due to chronic hypothyroidism and unlikely to be Hashimoto encephalitis. A spinal tap showed clear cerebrospinal fluid (CSF) with protein of 72 mg/dL (normal <45 mg/dL), WBC 7/uL (normal 0-5 /uL) with lymphocytic predominance (96% lymphocytes), and 4 oligoclonal bands

(normal 0-1 bands), which was suggestive of an autoimmune etiology. CSF cultures were negative. Both serum paraneoplastic panel (ANNA-1, ANNA-2, PCA-1) and CSF paraneoplastic panel were negative (Amphiphysin Ab, AGNA-1, ANNA-1, ANNA-2, ANNA-3, CRMP-5-IgG, PCA-Tr, PCA-1, PCA-2, VGCC Ab).

The final diagnosis was concluded to be PCD due to his known cancer diagnosis, subacute pancerebellar symptoms with onset in <12 weeks, and positive oligoclonal bands and mildly inflammatory CSF.³

He received methylprednisolone (1g intravenously daily for 3 days) which resulted in mild symptom improvement. A right inguinofemoral lymphadenectomy was performed 11 weeks after MCC diagnosis. The final pathology showed no evidence of residual metastatic disease; focal biopsy site changes were observed in one of 5 lymph nodes, confirming the initial biopsied lymph node was removed and examined. Adjuvant immunotherapy was not recommended due to his negative final pathology.

He received at-home physical and occupational therapy following discharge from the hospital and later received outpatient therapy at a specialized interdisciplinary balance center. At 7 months after surgery, he was still largely reliant on a walker, but was able to ambulate independently for short distances. He had near-baseline vision and speech. He developed lymphedema of his right thigh after surgery which was managed with compression and physical therapy. Brain MRI 6 weeks after surgery and computerized tomography scan of the abdomen and pelvis 7 months after surgery were negative for recurrent disease.

Discussion

We describe a case of Merkel cell carcinoma with unknown primary and paraneoplastic cerebellar degeneration with subsequent spontaneous regression of disease, and to date, no evidence of recurrence. Interestingly, in our case and in review of known case reports of cerebellar degeneration and MCC, 5 out of 7 cases had MCC with an unknown primary (**Table 1**).^{4,9}

The incidence of UPMCC has been shown to be 15%.¹⁰ Studies have shown that UPMCC has improved overall survival and decreased recurrence rates as compared to MCC with known primary.^{10,11} It is unclear whether the origin of UPMCC is due to spontaneous regression of the primary site, phenotypic variability, or de novo nodal development of MCC. We posit that the correlation between UPMCC and paraneoplastic cerebellar degeneration supports that UPMCC is due to spontaneous regression of the primary tumor, as the immune response against the primary site initiates a response to self-antigens.

Our case not only had an unknown primary, but also had complete spontaneous regression (CSR) of the nodal disease. CSR is defined as the complete disappearance of a tumor without treatment. In MCC, CSR is rare and has an incidence of 1.5%.¹² The pathophysiology has yet to be delineated, but there is evidence that spontaneous regression is linked to the activation of an immune response secondary to an incisional biopsy; one study showed that 85% of patients have had spontaneous regression after biopsy.¹³ Biopsy specimens in previous cases suggest that it is an antitumoral, T-cell mediated response that leads to regression.¹³

Finally, despite negative laboratory testing, the working diagnosis for neurologic decline was attributed to a paraneoplastic syndrome. It is important to note the limited diagnostic value of the paraneoplastic panel. The patient in this case had a negative serum and CSF paraneoplastic panel, which has been found to be negative in 18.3% of patients with PNS and up to 40% of patients with PCD.^{3,14} The paraneoplastic panel has been shown to have a sensitivity of 34% and specificity of 86% with poor utility for case detection.¹⁵ Clinical evidence continues to be paramount for this diagnosis, which is particularly important as early treatment leads to improved outcomes.

Limitations of this report and review include the small number of previously reported cases, the paucity of details in select previous cases, and the inability to estab-

lish a cause-effect relationship of the current case given that this is a single case study. Another limitation includes the relatively short follow up of the patient at only 7 months post-surgery. However, this case report adds to the very limited published literature on MCC and PCD.

Our patient presented with biopsy-proven MCC and subsequently developed subacute, progressive cerebellar symptoms. Temporally, the development of his paraneoplastic cerebellar degeneration is in line with an immune response occurring after biopsy, which then may have caused CSR. This is unlike previously reported cases of cerebellar degeneration in MCC as the majority of PNS symptoms develop prior to biopsy. For our case, we postulate that our patient's biopsy triggered a more robust immune response leading to complete spontaneous regression and generated an autoimmune response toward self-antigens, which caused his PCD. **MM**

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Carris Health is a multi-specialty health network located in west central and southwest Minnesota and is the perfect match for healthcare providers who are looking for an exceptional practice opportunity and a high quality of life.

INTERESTED BE/BC PHYSICIANS IN THE FOLLOWING SPECIALTIES, PLEASE INQUIRE WITH US FOR MORE DETAILS.

- Anesthesiology
- Hospitalist
- Orthopedic Surgery
- Dermatology
- Internal Medicine
- Pediatrics
- ENT
- Nephrology
- Psychiatry
- Family Medicine
- Neurology
- Psychology
- Gastroenterology
- OB/GYN
- Urgent Care
- General Surgery
- Oncology
- Urology

Loan repayment assistance available.

FOR MORE INFORMATION:

Shana Zahrbock,
Physician Recruitment
Shana.Zahrbock@carrishealth.com
(320) 231-6353 | carrishealth.com



Physician Opportunities

Mayo Clinic and Mayo Clinic Health System – Minnesota’s top Employer (*Forbes*, 2020-2021) – is seeking physicians for Moonlighting/ Per Diem/Supplemental work in these Minnesota locations:

- Adult Inpatient Psychiatry– Albert Lea, MN
- Adult Inpatient Psychiatry - Mankato, MN

Mayo Clinic is the nation’s top ranked hospital (*U.S. News & World Report*, 2020-2021), ranked #1 in more specialties than any other care provider. Mayo Clinic Health System provides care to local communities through a network of facilities in Minn., Wis., and Iowa. We provide a rewarding career that supports innovation and promotes excellence in patient-centered care. It’s an environment in which you can thrive. And with a wealth of resources like an integrated EMR and top specialists to collaborate with, you can give your patients the quality of care you strive for.

If you are interested in learning more about any one of these opportunities, please contact **Maddie Dosch** at Dosch.Madalyn@mayo.edu



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Physician Opportunities

Mayo Clinic and Mayo Clinic Health System – Minnesota’s top Employer (*Forbes*, 2020-2021) – is seeking physicians to join our life-changing practice in these Minnesota locations:

- Adult Psychiatrist – Albert Lea
- Child Psychiatrist - Albert Lea

Mayo Clinic is the nation’s top ranked hospital (*U.S. News & World Report*, 2020-2021), ranked #1 in more specialties than any other care provider. Mayo Clinic Health System provides care to local communities through a network of facilities in Minn., Wis., and Iowa. We provide a rewarding career that supports innovation and promotes excellence in patient-centered care. It’s an environment in which you can thrive. And with a wealth of resources like an integrated EMR and top specialists to collaborate with, you can give your patients the quality of care you strive for.

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ELEAZAR P. BRIONES, MD, FACS

- Chief of Surgery, CCM Health Montevideo.
- MMA member since 1978.
- Born and raised in Concepcion, Tarlac, Philippines. Attended Far Eastern University for undergraduate and medical school. Interned as a non-commissioned officer of the United States Air Force at Clark Air Force Base during the Vietnam war. Surgery residency at University of New Jersey School of Medicine and Dentistry. Private practice and University of Minnesota RPAP clinical professor in Montevideo since 1977.
- Married to Jan (Borstad) Briones, Doctor of Nursing Practice (University of Minnesota). The two met at the Montevideo hospital in 1980 and have five children: Natalie, Eleazar II and Naomi, all physicians; Nathan, a small business owner; and Ashley, a food scientist; as well as an American Eskimo puppy, Camino.



Became a physician because ...

The physical and financial struggles of people in the rural, agrarian community of my childhood were not lost on me. Many could not afford or access quality healthcare. Of modest means, my parents led by example in helping all who reached out to them in need. I chose medicine as it seemed the most meaningful way for me to do the same.

Greatest challenge facing medicine today ...

Recruiting curious and sharp young minds to follow in our footsteps, especially in rural and primary care settings, is more difficult each year. We face a shortage as the financial incentives of technology and corporate worlds draw many of the brightest and best away from the highest calling—the privilege of caring for the suffering. Although the demands of our profession can be daunting at times, they are no match for the fulfillment of serving patients in their hour of need.

Favorite fictional physician ...

St. Elsewhere's Dr. Mark Craig was an edgy heart surgeon who day in and day out strove for excellence in his practice. For many within his sphere of influence, this served to empower and motivate them to do the same. His novel view of the world of medicine brought levity and entertainment through the 1980s. Although metropolitan hospitals sought after him, he remained faithful to St. Elsewhere—and to his patients and students—changing and impacting one life at a time.

If I weren't a physician ...

I would be a teacher. The child of two inspirational educators, I am wired in their likeness. My time in the clinical setting finds me teaching everyone around me—residents, medical students, undergraduates, nurses, techs and patients. The more everyone on the team knows, the better the outcomes for patients. Whatever my chosen profession, teaching would be at the center.

JOHN PATRICK (JP) JANOWSKI, MD

- PGY-4 resident at Mayo Clinic completing sequential dual training in psychiatry and internal medicine at Mayo Clinic and Washington University, St. Louis.
- MMA member since 2017.
- New York native—born in New York City, grew up on Long Island, lived, worked and studied in New York City for 12 years before moving to Minnesota for residency. Undergraduate at Cornell University, post-baccalaureate pre-med certificate from Bryn Mawr College and medical degree from Albert Einstein College of Medicine. Worked for the medical director of the New York State Department of Health AIDS Institute publishing on the quality of STI care in New York State's hospitals and community health centers and designing the nation's first online Prevention with Positives clinician toolkit. Volunteered for a free clinic in the South Bronx, member of the National Health Service Corps and completed international psychiatry electives in under-resourced Uganda and Chile. Currently serves as chair of the MMA Resident & Fellow Section and in leadership positions for the Mayo Fellows Association and Zumbro Valley Medical Society.
- Parents, older sister and brother in New York. Younger sister serves in the U.S. Navy, currently based in Denver.

Became a physician because ...

I enjoy helping and caring for people and am passionate about vulnerable populations, communities and advocacy. From my time volunteering at a free clinic while working in a variety of other fields after college, I realized that medicine wonderfully encapsulated all these

interests. This led me to return to my original interest in medicine and path to medical school that I had been on in high school and early college.

Greatest challenge facing medicine today ...

Ensuring that the needs of patients and communities come first and that healthcare is led by physicians amid efforts to corporatize the field.

Favorite fictional physician ...

As a college history major, some of my favorite physicians are historical rather than fictional! I admire Benjamin Rush, since he was not only a physician, but also an advocate, social reformer, humanitarian and educator. He signed the Declaration of Independence, opposed slavery and advocated for public schools and education for women. He's also considered to be the father of American psychiatry.



If I weren't a physician ...

I would probably work in government trying to achieve the same goals for patients and communities via legislation, policy and advocacy.



Best Practices for Prescribing Opioids

AND OTHER CONTROLLED SUBSTANCES

You need to earn 2 CME credits to fulfill the legislative mandate. Where better to turn than the Minnesota Medical Association, the state's largest physician advocacy organization?

During the 2019 session, the Minnesota Legislature passed a law that requires individuals with licenses with the authority to prescribe controlled substances to obtain CME on best practices in prescribing opioids and controlled substances.

To help physicians comply with this mandate, the MMA has developed an online, self-assessment activity that includes content on best practices in prescribing opioids as well as non-pharmacological and implantable device alternatives for treatment of pain and ongoing pain management.

This activity has been approved for AMA PRA Category 1 Credit™

Cost

MMA members are free, others pay \$60.

Questions on the activity?

Email the MMA
(cme@mnmed.org)

Questions about the mandate and how to provide documentation of course completion?

Email the Minnesota Board of Medical Practice
(Medical.Board@state.mn.us)

**For more information, visit
[www.mnmed.org/
opioidmandate](http://www.mnmed.org/opioidmandate)**





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Why COPIC

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COPIC is proud to be the endorsed carrier of the Minnesota Medical Association. MMA members are eligible for a 10% premium discount.
