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ON SUICIDE WATCH

Any physician can be the first line of defense against death by suicide with knowledge, tools, and a willingness to ask questions. PAGE 14

ALSO

ULTRA-PROCESSED FOODS — what to tell patients? PAGE 24

SAFE GUN STORAGE — what to ask patients PAGE 20

Looking for the **NEXT PANDEMIC** PAGE 34

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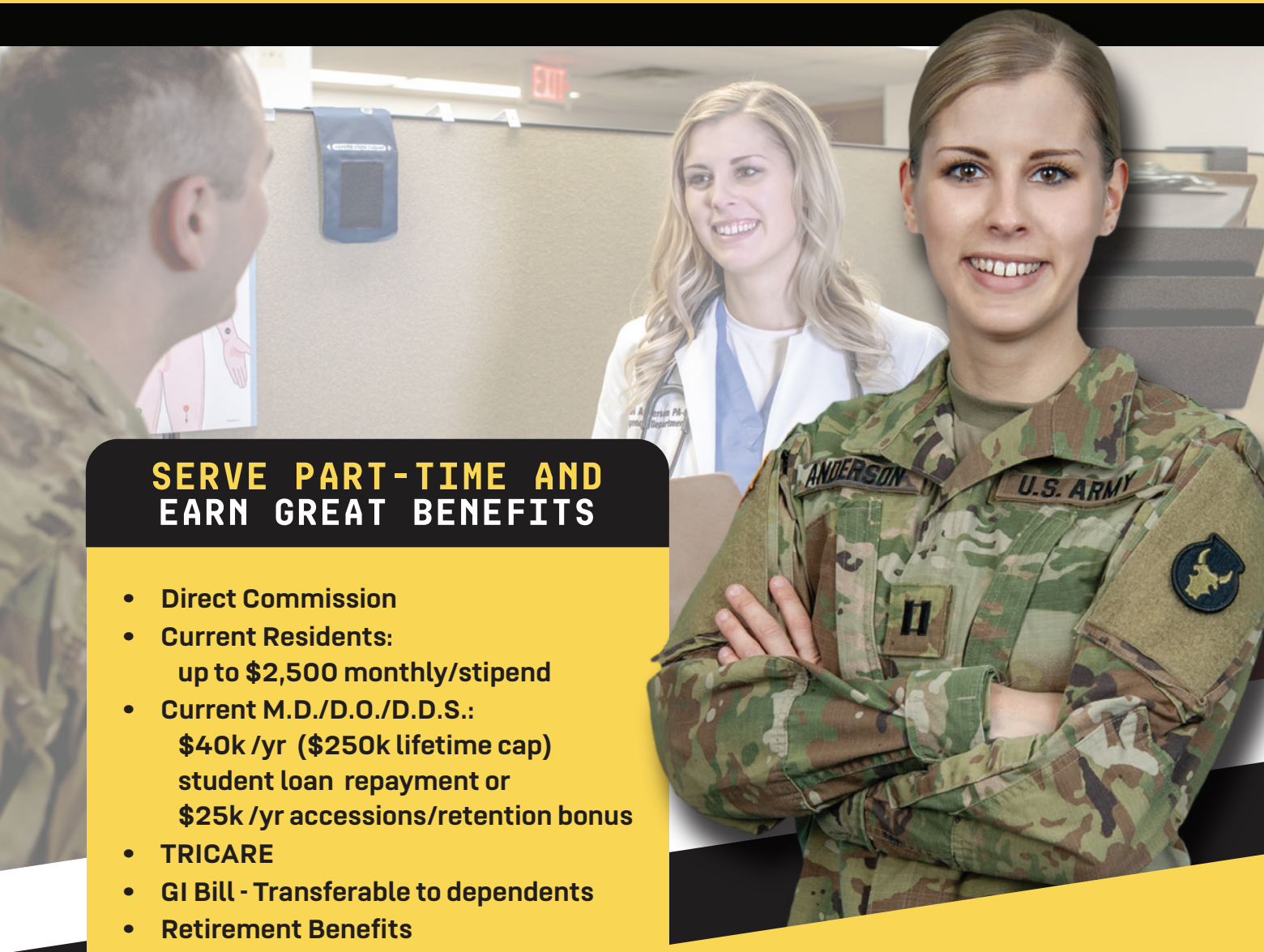

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Life and Hope After Stroke

Minnesota woman shares her inspiring story of stroke rehabilitation, recovery

On August 10, 2024, Mindy Tosel-Waddell knew something just wasn't right. She assumed the dizziness and heaviness in her chest was a virus. But when she ended up on the floor from her lack of balance, she decided she needed to go to the hospital.

Mindy remembers fainting while being admitted to the ER and remembers being told she needed to have emergency heart surgery, but she remembers little more after that until she woke up nearly a month later in the hospital.

Mindy experienced a sudden coronary artery dissection, which occurs when an artery wall suddenly tears. During surgery, Mindy experienced several strokes and seizures, which caused severe damage to her brain. Her medical team put her into an induced coma. The situation was grim. So grim that the family was working on pulling together her obituary.

When she finally awoke, Mindy says it was "like a ball of yarn kept unravelling." She learned about her strokes and learned that she would have a long road to recovery before her. She was transferred to an inpatient rehabilitation facility, where she received intensive occupational, physical and speech therapy.

Stroke can happen to anyone, at any age. But there is life – and hope – after stroke. Rehabilitation can build strength, capability

and confidence. It can also help someone who experiences a stroke continue daily activities, despite the effects of their stroke.

There are more than 7 million stroke survivors living in the U.S. today. But not all strokes – and not all stroke survivors – are the same. Finding the right rehabilitation plan is vital to recovery after stroke. The American Stroke Association has developed standards to help rehabilitation facilities provide consistent, high-quality care for individuals as they recover from stroke.

Facilities that participate in the Association's post-acute stroke standards program agree to follow the Association's treatment guidelines and have made a commitment to providing care that is based on standards aligned with American Stroke Association science and vetted by stroke rehabilitation experts.

Mindy's rehabilitation included inpatient and outpatient care and was customized to her individual needs. The program was very disciplined and included back-to-back sessions throughout the day, with the goal of maximizing her recovery in the first 6 months after her stroke.

"I had to learn how to get dressed, how to eat, how to be mobile and walk," Mindy says.

Mindy says today she is about 85-90% back to being herself. She credits the village behind her, including her family and close friends and the specialists involved in her rehabilitation, for her recovery. She also is an active participant in several stroke support groups that she attends with her husband.

"They helped me so much," she says. "Sometimes when I miss the stroke support group, I feel almost lost. I need that as a little kick – you hear other stories of what other caregivers and survivors have gone through. It's a time of sharing and it boosts you a little bit."

American Heart Association.
Mission:Lifeline®
Stroke

SCAN HERE

To learn more about stroke rehabilitation options

For more information, contact
Sarah.Donnelly@heart.org

Learn more about this initiative at
heart.org/PostAcuteStroke

Congratulations to the following Minnesota facilities who have joined the American Heart Association and American Stroke Association's post-acute stroke care initiative.

These providers have agreed to follow the Association's treatment guidelines and have made a commitment to providing care that is based on standards aligned with American Stroke Association science and vetted by stroke rehabilitation experts:

- Appleton Area Health (Appleton)
- CentraCare-St. Cloud Hospital (St. Cloud)
- Community Memorial Hospital Association (Cloquet)
- Courage Kenny Rehabilitation Institute (St. Paul)
- Courage Kenny Rehabilitation Associates (Minneapolis)
- Courage Kenny Rehabilitation Institute TRP (Golden Valley)
- Glencoe Regional Health Services (Glencoe)
- Glenfields Living with Care (Glencoe)
- Gunderson St. Elizabeth's Hospitals & Clinics (Wabasha)
- Hennepin County Medical Center (Minneapolis)
- Madelia Health Hospital (Madelia)
- Madison Hospital (Madison)
- Meeker Memorial Hospital (Litchfield)
- MHealth Fairview Acute Rehabilitation Center (Minneapolis)
- Minnesota Masonic Home (Bloomington)
- North Memorial Health Care (Robbinsdale)
- Pipestone County Medical Center (Pipestone)
- Regions Hospital (St. Paul)
- Riverwood Healthcare Center (Aitkin)
- Sanford Medical Center (Thief River Falls)
- St. Luke's Hospital of Duluth (Duluth)
- Windom Area Health (Windom, MN)

CONTENTS

Nov/Dec 2025 | VOLUME 108 | ISSUE 6

IN THIS ISSUE

Any physician can be the first line of defense against death by suicide with knowledge, tools, and a willingness to ask questions.

ON THE COVER

FEATURES

DEPARTMENTS

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Colin West, MD, PhD

Farewell, and hello again

I will be departing my role at *Minnesota Medicine* after this issue. This is not a goodbye to the Minnesota Medical Association, though, as I will have begun my initial term as a member of the MMA Board of Trustees.

It has been my pleasure to serve as one of *Minnesota Medicine*'s medical editors for the past four years. In this role, I have had the privilege of working with a wonderful team of editors and contributors to guide content and direction for each issue. I have also been given a platform to contribute my thoughts on topics I hope have been relevant to physicians across Minnesota. Over my four years I have written on post-traumatic growth as we recover from the COVID-19 pandemic, perfection as a barrier to sustainable careers, ensuring technology serves us rather than vice versa, collaborative implementation of patient-centered healthcare quality metrics, true partnerships with our patients, physician self-care, and the importance of meaning, values, and purpose ("the MVPs") in medicine.

As suggested by this walk down memory lane, I will be departing my role at *Minnesota Medicine* after this issue. This is not a goodbye to the Minnesota Medical Association, though, as I will have begun my initial term as a member of the MMA Board of Trustees. In this new role, I look forward to advocating for the healthcare system both physicians and patients deserve. This will include continued work to promote physician well-being.

Concisely defining well-being can be challenging, but the definition I have used in my work is "the state in which an individual can achieve their greatest desired potential as a complete human being." We are fortunate in Minnesota to have teams across the state deeply committed not just to improving but to optimizing well-being for our colleagues who contribute so much in their daily work to help patients.

Convening and working with these teams, the Minnesota Medical Association has been instrumental in changing physician licensure processes to remove stigmatizing and intrusive mental health language. Just last year these changes were extended to legislatively mandate removal of similarly inappropriate language from credentialing forms for all healthcare professionals in Minnesota. This step acknowledges the importance of workplace well-being for every member of the healthcare team—we all work together with a shared mission on behalf of our patients.

In addition to these headlining advances, last year the MMA's Physician Well-being Advisory Committee, comprised of well-being leaders representing essentially every healthcare system in Minnesota, developed a larger set of recommendations to the MMA Board to accelerate physician well-being efforts across the state. These recommendations continue to be a working road map for the MMA, and I am thrilled to stay connected to moving them forward in my new board role. Concurrent initiatives include prior authorization reform, quality measurement redesign, the Treat Yourself First Coalition, and the recently launched MMA Physician Well-being Community of Practice for physician well-being champions across Minnesota. I encourage any reader with interest in these programs to check out the MMA home page, contact the MMA, or reach out to me directly any time.

I will close by expressing my gratitude for my co–medical editors and the entire *Minnesota Medicine* team. Along with Editor Greg Breining, and MMA Director of Communications Dan Hauser, Drs. Rahel Nardos and Chris Wenner are continuing in their roles as medical editors, and I have no doubt my successor will join them in taking *Minnesota Medicine* to new heights. Thank you all for a wonderful four years. I am confident that this is not truly farewell, but really hello again from a new and exciting vantage point. **MM**

Colin West, MD, PhD, is professor of Medicine, Medical Education and Biostatistics, Mayo Clinic. He is one of three medical editors for *Minnesota Medicine*.

THE BIG ONE: HOW WE MUST PREPARE FOR FUTURE DEADLY PANDEMICS

A critical takedown of U.S. COVID-19 response

BY CHARLES R. MEYER, MD

Hazel! Augie! It's time." It's 2020 and my son Graham was summoning his 5-year-old twins to their computer screens for remote kindergarten. The following hours saw Graham cajoling and commanding, struggling to martial their attention. Today Graham does not want to repeat his COVID-19 experience. Similarly the American people would like to relegate the COVID drama of masks, shelter in place, school closings, economic downturn, office shutterings, and lockdowns to a painful dream in history.

In their book *The Big One: How We Must Prepare for Future Deadly Pandemics*, Michael Osterholm, founding director of the Center for Infectious Disease Research and Policy, and journalist Mark Olshaker present a blueprint for avoiding the pain and destruction in a future pandemic that they see as inevitable—"not an if but a when." To focus their discussion, the authors present a fictitious scenario for a SARS-3 pandemic with chapters of the story starting each of their chapter discussions. The tale is familiar: a respiratory virus passed via aerosols originates in a foreign country and spreads quickly as its victims traverse the world. It spreads easier and kills quicker than its predecessor. The medical community reacts. The politicians react. Mistakes are made, some of them repeats of the faux pas of the COVID pandemic.

In chapters covering mandates, vaccination, surveillance, and communication, Osterholm and Olshaker pinpoint what they see as the errors made during COVID, which they summarize as "mistakes of judgment, denial of scientific evidence, overpromising and underperforming leadership, misleading or confusing communications, reliance on 'experts' who actually weren't, inadequate drugs and supplies, insufficient healthcare facilities and personnel, intensified economic inequality, and institutions floundering to meet their stated missions." Leaders denied the evidence that the virus spread via aerosols leading to confusing and ineffective recommendations for masking. They instituted lockdowns, school closings, and border closings indiscriminately without regard to the behavior of the disease or evidence that these measures were effective. They instituted vaccine mandates even after the vaccine lost its efficacy against the virus and its variants.

The Big One: How we must prepare for future deadly pandemics, Michael T. Osterholm and Mark Olshaker, Little, Brown, Spark, 2025

Although the authors commend the expeditious production of a COVID vaccine accomplished by Operation Warp Speed, they don't believe relying on a similar response in future pandemics is wise since the logistics are complicated: "It's simplistic to think we will have solved our vaccine challenge if we identify an effective and safe vaccine. We also must consider the manufacturing requirements, speed of production, cold chain storage needs, dosing, delivery methods, and expert staff required for manufacturing, in particular in low and middle income countries." They hope for a more universal vaccine development to combat future pandemics, although currently this is an unrealized hope.

They criticize politicians during COVID-19 for overly optimistic and sometimes inaccurate statements. They reserve harsh judgment for the first Trump administration, quoting a book by Philip Zelikow that "the administration abdicated its wartime responsibility to lead." And the early moves of Trump II have gutted the agencies that should guide future pandemic responses. Osterholm and Olshaker are not optimistic about pandemic preparedness under the current administration since most of their remedies require national organizations and cooperative action by the federal government.

The recipe for preparedness in *The Big One* is not easy or cheap and seems unlikely to pull much weight in this era of defunding and DOGE. But if we believe with Osterholm and Olshaker that a viral pandemic appearance is not if but when, then we should listen to their recommendations.

Luckily, my twin grandchildren show no long-term effects of remote schooling as they are thriving in fifth grade. Many in our country were not so lucky. Large swaths of the school population are still lagging because they missed a year of effective teaching. Many victims struggle with lingering long-term COVID. We need to avoid repeating the mishaps of COVID-19 and be ready for the Big One. MM

Charles Meyer, MD, a general internist retired after 41 years practice, was editor-in-chief of *Minnesota Medicine* for 24 years.

Average physician compensation highest in Rochester, Doximity reports

Physicians in the Rochester, Minnesota, metro area led the nation in highest average compensation in 2024, according to the Doximity *Physician Compensation Report 2025*. Rochester remained ranked first after adjustment for cost of living.

"As a small market anchored by a leading medical system, Rochester saw an annual growth rate of 8.7%—one of the largest increases in physician compensation this year," said the report. Average compensation was $495,532. The Minneapolis metro area ranked eighth, at an average of $452,598.

Other findings of the Doximity report:

- The three top-paying specialties were neurosurgery, thoracic surgery, and orthopedic surgery.

- Average physician compensation rose 3.7% from 2023 to 2024, slightly less than 5.9% the previous year.
- The pay gap between primary care physicians and specialists declined slightly. In 2024 specialists earned 87% more than primary care physicians. In 2022 the gap was 100%.
- Women physicians averaged $120,917 less in pay after compensating for specialty, location, and experience. That amount represented a 26% pay gap in 2024, up from 23% the previous year.
- The top 10 specialties by demand were internal medicine, family medicine, psychiatry, pediatrics, obstetrics and gynecology, emergency medicine, neurology, general surgery, anesthesiology, and radiology.
- Of physicians surveyed, 81% "agreed" or "strongly agreed" that current reimbursement policy was key to the decline of private practices.
- Physicians are increasingly considering working locum tenens "to supplement their income or to practice with the benefits of reduced hours and more flexibility." More than 63% of physicians said they are already doing so or are considering taking on such a role within the next five years.

Read the full Doximity report at www.doximity.com/reports/physician-compensation-report/2025.

Survey: Physicians facing more misinformation and disinformation

America's physicians are seeing a rise in misinformation and disinformation from patients these days, and it's impacting patient care, according to a new study from the Physicians Foundation.

Misinformation is considered false or inaccurate information. Disinformation is false or inaccurate information deliberately intended to mislead.

Nearly 60% of physicians said they think that misinformation and disinformation significantly impact patient care.

More than six in 10 physicians report that their patients are coming to them either misinformed or disinformed. The highest percentage is affecting rural physicians where 38% of physicians report a "great deal" of misinformation or disinformation from patients. That number is 21% of suburban physicians, and 25% of urban physicians.

Nearly 90% of respondents said misinformation and disinformation have increased compared to five years ago.

Genetic test predicts response to weight-loss drugs

Mayo Clinic researchers have developed a genetic test that can help predict how people will respond to weight loss medications such as GLP-1s.

The test estimates an individual's "calories to satiation"—how much food it takes to feel full—and links this biological trait to treatment success. The findings, published in *Cell Metabolism*, represent a promising step toward more personalized and effective treatments for people with obesity.

"Patients deserve treatments that reflect their biology, not just their body size," says Andres Acosta, MD, PhD, a gastroenterologist at Mayo Clinic and senior author of the study. "This test helps us deliver the right medication to the right person from the start."

Because obesity stems from a mix of genetic, environmental, and behavioral factors that vary from person to person, different people respond differently to weight-loss interventions. Yet treatment decisions often rely on simple measures such as body mass index rather than the biological processes that drive weight gain and weight loss.

To uncover these processes, Acosta has focused on satiation, the physiological signal that tells the body it has eaten enough. In 2021 he and his colleagues defined a series of obesity phenotypes to describe eating patterns. For example, some people with obesity tend to eat very large meals (a phenotype the researchers labeled "hungry brain"), while others may eat average portions but snack frequently throughout the day ("hungry gut").

In this study, the researchers studied satiation in nearly 800 adults with obesity by inviting them to partake in an all-you-can-eat meal of lasagna, pudding, and milk until they felt "Thanksgiving full." The results revealed striking variation: Some participants stopped after 140 calories whereas others consumed more than 2,000. On average, men consumed more calories than women.

The team investigated possible explanations for this variability. Several factors, including body weight, height, percentage of body fat, waist-to-hip ratio, and age—as well as appetite-related hormones such as ghrelin and leptin—played a small role. But none accounted for the huge range in calorie intake. So the researchers turned to genetics.

Using machine learning, the researchers combined variants in 10 genes known to influence food intake into a single metric called the CTS-GRS (Calories to Satiation Genetic Risk Score). The score, calculated from a blood or saliva sample, provides a personalized estimate of a person's expected satiation threshold.

Mayo Clinic researchers then calculated this CTS-GRS metric in clinical trials of two FDA-approved medications: a first-generation weight loss drug, phentermine-topiramate (brand name Qsymia), and a newer GLP-1 drug, liraglutide (Saxenda). They found that:

- People with a high satiation threshold lost more weight on phentermine-topiramate. This drug may help control portion size and reduce large-meal overeating (hungry brain).
- People with a low satiation threshold responded better to liraglutide. This drug may reduce overall hunger and frequency of eating (hungry gut).

"With one genetic test, we can predict who is most likely to succeed on two different medications," says Acosta. "That means more cost-effective care and better outcomes for patients."

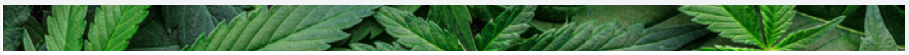
The team has conducted additional studies to predict response to semaglutide, another GLP-1 medication (sold under the brand names Ozempic and Wegovy), and results are expected soon. They are working to expand the test by incorporating data from the microbiome and metabolome, as well as developing models to predict common side effects such as nausea and vomiting.

–Marla Broadfoot, PhD, Mayo Clinic

Physicians across specialties, geographic areas are quitting at increasing rates

According to a national study of more than 712,000 physicians who provided care to Medicare patients between 2013 and 2022, the rate of physicians quitting clinical practice increased during the period. According to the study by researchers from the Yale School of Medicine and University of California, published in the *Annals of Internal Medicine*, attrition increased among both men and women, in both urban and rural areas, and across specialties and geographic areas, but was highest among female physicians and those practicing in rural settings.

According to the study, "Caring for Medicare beneficiaries with a greater average risk score, a greater average age, and a greater percentage of dual-eligible beneficiaries was also associated with attrition…. These findings have implications for workforce planning and the design of interventions to sustain the physician workforce."



New website provides useful info on cannabis use

The Minnesota Department of Health (MDH) has launched a new webpage that includes educational resources on cannabis.

The webpage is intended to address the immediate communication needs of the public regarding cannabis use. As new tools and materials are developed, MDH will add them to the webpage.

Currently available documents include resources for individuals who are pregnant, plan to become pregnant, or are breastfeeding. Fact sheets are available in Spanish, Somali, and Hmong.

Persons with psychosis use more cannabis after legalization

As various states have legalized the use and commercialization of cannabis products, persons who have been diagnosed with a psychotic illness or episode increased their use of those products by nearly 10%—a greater amount than previously reported estimates of the general population, according to a recent study in *JAMA Psychiatry*.

This study sample consisted of 1,856 adults with a lifetime history of psychosis. The study included data from 2014 to 2022 with five years of follow-up.

According to the summary of the study, conducted by several institutions in Massachusetts, "Given how cannabis can negatively affect illness course and health service utilization in individuals with psychosis, these results should be considered by regulators designing policies around taxation, potency, advertising, and health warnings."

MDH releases report on health plan administrative spending

On August 7, the Minnesota Department of Health's Health Economics Program released its most recent report on health plan company administrative spending.

The report presents administrative spending data for health plan companies that collected more than $3 million in total health premiums from Minnesota residents in 2022 and 2023. The report includes a summary of high-level trends and findings, as well as detailed tables for each eligible Minnesota group purchaser on 14 categories of administrative spending.

Key findings include:

- In 2023, health plan companies collectively spent $2.84 billion to offer, design, sell, and enable use of health insurance benefits for Minnesota residents.
- This spending amounted to an average of $491 per insured Minnesotan in 2023.
- Administrative spending by health plan companies in 2022 and 2023 continued its upward trend, both in absolute terms and on a per insured basis.
- Administrative spending as a percent of total costs settled at the second (2022) and third (2023) highest level of spending over the past 10 years.

Findings from this report represent a baseline for a broader study on data and estimates of system-wide administrative spending related to healthcare insurance and delivery. That study—for which results are expected in early 2026—aims to identify recommendations for reducing the volume of expenditures devoted to healthcare administration in Minnesota.

ED and ICU staffing, salaries decline and patient outcomes worsen after private equity acquires hospitals

In hospitals acquired by private equity, compared with "nonacquired" hospitals, salaries and staffing decreased. "This decreased capacity to deliver care may explain the increased patient transfers to other hospitals, shortened intensive care unit lengths of stay, and increased emergency department mortality," according to a recent study in *Annals of Internal Medicine* by researchers from the University of Chicago, University of Pittsburgh, Harvard Medical School, and Beth Israel Deaconess Medical Center in Boston. The research was conducted with a grant from the National Heart, Lung, and Blood Institute.

Researchers compared more than 1 million ED visits and 121,000 ICU hospitalizations in 49 private equity hospitals to more than 6 million ED visits and 760,000 ICU hospitalizations in 293 control hospitals.

"After acquisition, private equity hospitals reduced ED salary expenditures by 18.2%…and ICU salary expenditures by 15.9%… relative to control. This occurred alongside average hospital-wide reductions in full-time employees by 11.6% and salary expenditures by 16.6%," according to the report. After acquisition, ED patient mortality increased 7.0 additional deaths per 10,000 visits compared to controls. No change was observed in ICU mortality.

State creates Health Care Affordability Advisory Task Force

The Center for Health Care Affordability (CHCA) at the Minnesota Department of Health (MDH) has formed a Health Care Affordability Advisory Task Force.

The 15-member task force, which held its first meeting on September 12, is charged with studying and recommending ways to improve healthcare affordability in Minnesota.

The Health Care Affordability Advisory Task Force represents a balance of perspectives, including consumer voices, expertise in healthcare financing and administration, firsthand experience with affordability challenges, and leadership from both urban and rural parts of the state. It is tasked with identifying the key drivers of healthcare spending growth and developing bold, evidence-based policy options to improve affordability for Minnesotans.

In developing its recommendations, task force members will analyze Minnesota healthcare cost data, review national and state policy research, as well as elevate the lived experiences of patients, workers, and employers across the state. Task force members will also examine policies implemented in other states. They will look at impacts of those policies—including efforts to limit price growth, ensure equal payments for the same service regardless of care setting or increase oversight of healthcare consolidation—and consider whether these strategies could improve affordability for Minnesotans.

Recognizing that rising healthcare costs are potentially putting care out of reach, the Minnesota Legislature directed MDH to establish the CHCA during its 2023 session.

The CHCA's work will focus on:

- Conducting research to understand the factors that drive healthcare costs.
- Exploring ways to reduce waste, low-value care, and administrative spending, and improve the delivery of high-value care.
- Consider the sustainability of healthcare spending growth and its relationship to health equity.
- Identify potential improvements to delivery systems, payment structures, and market reforms to enhance affordability.

The Health Care Affordability Advisory Task Force is the first of two task forces that will advise the CHCA. It will work in close collaboration with a Provider and Payer Advisory Task Force forming later this year. All task force meetings are open to the public and accessible online.

"We owe parents real data before we mess with kids' vaccination schedule"

As the Center for Disease Control and Prevention's Advisory Committee on Immunization Practices has created a new working group to examine the schedule for childhood vaccines, the University of Minnesota–based Vaccine Integrity Project declared that changing the schedule, especially eliminating combination vaccines, would increase the number of clinic visits and make it less likely children get fully vaccinated. "We owe parents real data before we mess with kids' vaccination schedule," according to the headline on the group's recent commentary.

"Combination vaccines exist for a reason: They reduce the number of injections children receive. Any parent who's brought an infant or toddler in for vaccines knows that fewer shots, along with fewer visits, are better. More appointments not only increase a child's distress; increasing the number also raises the chances of missed visits, especially for families with limited flexibility in their schedules," according to the commentary.

"Combination vaccines make it more likely that children stay on schedule for their recommended vaccines and complete them, which means they are better protected," the authors said. The commentary cited a 2017 study that found that "the likelihood of completing all vaccines in the series by 24 months was 2.5 times greater for children receiving combination vaccines compared with those receiving single-antigen vaccines only."

The Vaccine Integrity Project is a new initiative of the Center for Infectious Disease Research and Policy.

Mayo Clinic study reveals hidden causes of heart attacks in younger adults, especially women

A new Mayo Clinic study finds that many heart attacks in people under 65—especially women—are caused by factors other than clogged arteries, challenging long-standing assumptions about how heart attacks occur in younger populations.

Study findings published in the *Journal of the American College of Cardiology* examined over 15 years of data from the Rochester Epidemiology Project, providing the most comprehensive population evaluation of heart attack causes in people aged 65 and younger.

More than half of heart attacks in women under age 65 were caused by nontraditional factors, such as spontaneous coronary artery dissection (SCAD), embolism, and other conditions unrelated to artery-clogging plaque. Heart attack incidence was significantly lower in women than in men—but when women did have heart attacks, the underlying causes were often misdiagnosed.

SCAD, which typically affects younger, otherwise healthy women, was frequently missed and misclassified as a typical heart attack due to plaque buildup. The most common cause of heart attack in both sexes was atherosclerosis, or artery-clogging plaque, but this accounted for only 47% of heart attacks in women, compared to 75% in men. Five-year mortality rates were highest in people who had heart attacks triggered by stressors such as anemia or infection, even though these patients had lower heart injury levels.

"This research shines a spotlight on heart attack causes that have historically been under-recognized, particularly in women," says Claire Raphael, MBBS, PhD, an interventional cardiologist at Mayo Clinic and first author of the study. "When the root cause of a heart attack is misunderstood, it can lead to treatments that are less effective—or even harmful."

This new understanding could save lives. A misdiagnosed SCAD, for example, may be treated with a stent unnecessarily, increasing the risk of complications. Recognizing and correctly diagnosing these nontraditional heart attacks allows for more appropriate care and better long-term outcomes.

Key findings from the study:

- Out of 1,474 heart attacks, 68% were from typical plaque buildup (traditional heart disease), but nontraditional causes made up a majority of heart attacks in women.
- SCAD was nearly six times more common in women than men.

- Heart attacks caused by stressors such as anemia or an infection were the second-most common cause overall, and the deadliest, with a five-year mortality rate of 33%.
- Truly unexplained heart attacks were rare, making up less than 3% of cases after expert review.

Overall, the study provides insights that could reshape how heart attacks are diagnosed and managed in younger adults.

"Our research highlights the larger need to rethink how we approach heart attacks in this patient population, and for younger adult women, in particular. Clinicians must sharpen their awareness of conditions like SCAD, embolism, and stress-related triggers, and patients should advocate for answers when something doesn't feel right," says Rajiv Gulati, MD, PhD, chair of the Division of Interventional Cardiology and Ischemic Heart Disease at Mayo Clinic. Gulati is senior author of the study.

"Understanding why a heart attack happened is just as important as treating it," says Raphael. "It can mean the difference between recovery and recurrence."

–Terri Malloy, Mayo Clinic

AI helps predict severe asthma risks in young children

Mayo Clinic researchers have developed artificial intelligence tools that help identify which children with asthma face the highest risk of serious asthma exacerbation and acute respiratory infections. The study, published in the *Journal of Allergy and Clinical Immunology*, found the tools can detect those risks as early as age 3.

The work is part of Mayo Clinic's Precure strategic priority, which aims to predict and prevent serious diseases before they advance.

Asthma affects nearly 6 million U.S. children and is a leading cause of missed school, emergency visits, and hospital stays, according to the Centers for Disease Control and Prevention. Respiratory infections are the most common trigger of asthma attacks, but symptoms vary widely and change over time. That makes it hard for clinicians to know which children are most vulnerable, a gap these AI tools are designed to help address.

"This study takes us a step closer to precision medicine in childhood asthma, where care shifts from reactive care for advanced severe asthma to prevention and early detection of high-risk patients," says Young Juhn, MD, MPH, professor of pediatrics at Mayo Clinic and senior author of the study.

For the study, researchers examined electronic health records from more than 22,000 children born between 1997 and 2016 in southeastern Minnesota. To interpret the data at scale, they developed multiple artificial intelligence tools that use machine learning and natural language processing to extract details from physicians' notes.

The tools captured information such as symptoms and family history, allowing the team to apply two widely used diagnostic checklists for asthma in young children: the Predetermined Asthma Criteria and the Asthma Predictive Index. Clinicians use these checklists to assess signs such as recurring wheezing, coughs, or allergic conditions. Children who met the criteria on both lists formed a distinct subgroup at higher risk for serious complications.

When researchers compared this subgroup with other children in the study, the differences were clear. By age 3, the subgroup members were experiencing pneumonia more than twice as often and influenza nearly three times as often. They also had the highest rates of asthma attacks requiring steroids, emergency visits, or hospitalization. Respiratory syncytial virus infection was also more common in this group during their first three years of life.

Children in this subgroup were more likely to have a family history of asthma, eczema, allergic rhinitis, or food allergies. Further, their laboratory tests from a previous study showed signs of allergic inflammation—including higher eosinophil counts, allergen-specific IgE and periostin, which reflect type 2 inflammation—as well as impaired lung function. Together, the findings point to a high-risk asthma subtype that makes some children more vulnerable to acute respiratory infections and asthma exacerbation.

–Susan Murphy, Mayo Clinic

Mayo Clinic now out-of-network in UnitedHealthcare and Humana Medicare Advantage plans

Thousand of state beneficiaries of UnitedHealthcare and Humana Medicare Advantage plans will lose coverage next year for treatment at Mayo Clinic, according to the *Minnesota Star Tribune*.

Mayo Clinic is already out-of-network nationally with most Medicare Advantage plans, but will continue to participate in original Medicare.

Neither the insurers nor Mayo Clinic explained the reason for the change, though Humana in a statement said, "When providers require significantly higher reimbursement rates compared to original Medicare, it further strains our healthcare system."

Getting a smartphone before age 13 is associated with poorer mental health outcomes, according to study

Receiving a smartphone before age 13 is linked to weaker mental health and lower overall well-being in early adulthood, according to a global study of more than 100,000 participants published in the *Journal of Human Development and Capabilities*. The study was conducted by researchers from Sapien Labs, a nonprofit based in the Washington D.C. area.

Respondents aged 18–24 who first acquired a smartphone at 12 or younger were more likely than others to have "suicidal thoughts, detachment from reality, poorer emotional regulation, and diminished self-worth," the study reported. The effect was greatest among girls and young women and in English-speaking countries.

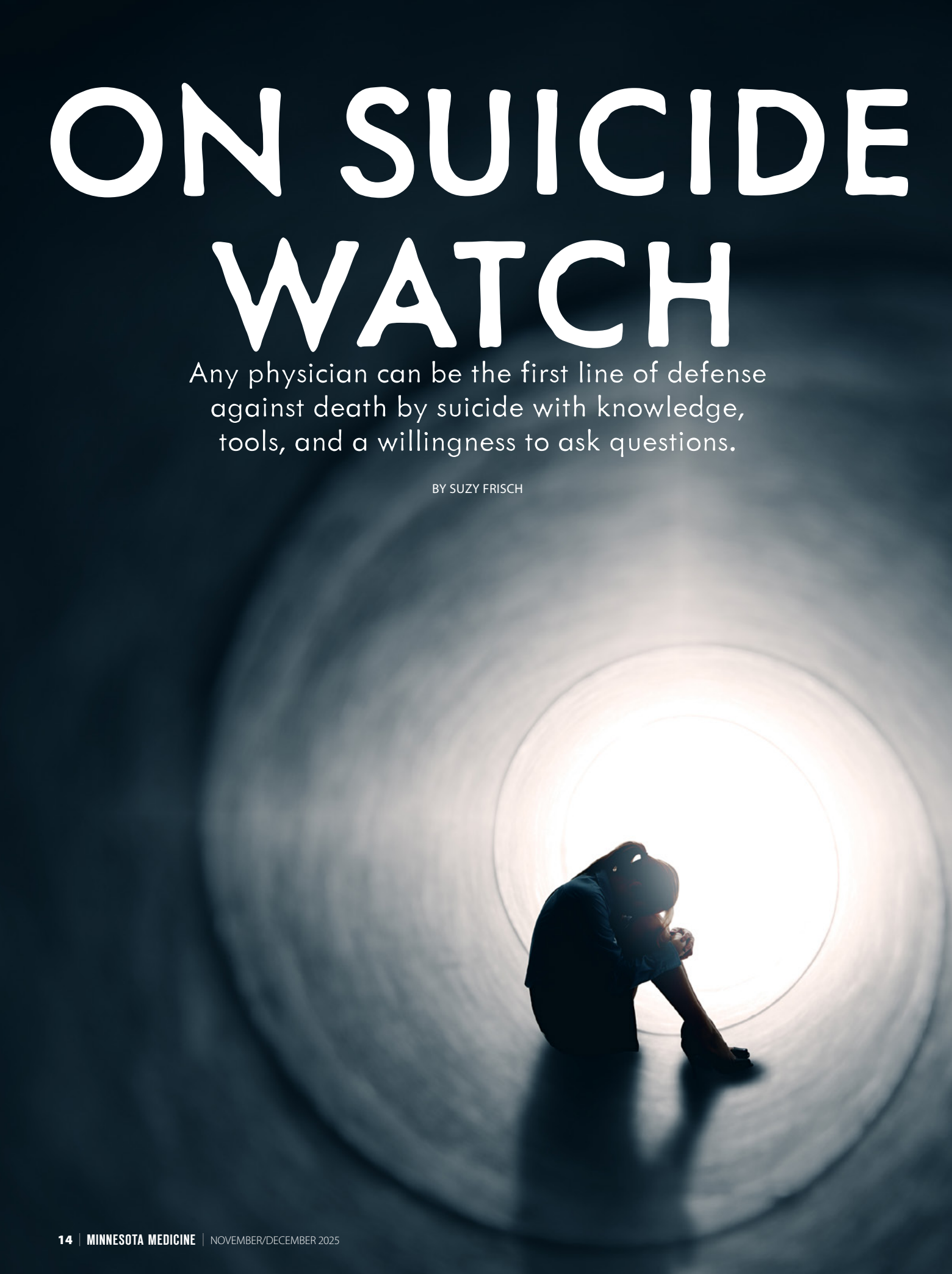
"These correlations are mediated through several factors, including social media access, cyberbullying, disrupted sleep, and poor family relationships," according to researchers.

"We propose the implementation of a developmentally appropriate, society-wide policy approach, similar to those regulating access to alcohol and tobacco, that restricts smartphone and social media access for children under 13, mandates digital literacy education, and enforces corporate accountability."

ON SUICIDE WATCH

Any physician can be the first line of defense against death by suicide with knowledge, tools, and a willingness to ask questions.

BY SUZY FRISCH



Suicide is a public health problem that shows no sign of truly abating. It's the 11th leading cause of death in the United States, with nearly 50,000 people dying by suicide every year. In Minnesota in 2023 and 2024, suicide was the cause of death for 812 and 813 people respectively, down from a record high of 860 in 2022.

Though suicide involves people of all ages across the state, it's not an unsolvable crisis. Fatal self-harm can be prevented, people can find help, and they often recover. The key is for all physicians and healthcare professionals to be aware of patients' clues and learn what questions can invite people to share what they are experiencing, says Molly Peterson, MPH, director of adult mental health programs at the National Alliance on Mental Illness (NAMI) Minnesota.

"It's important for physicians to know the significant role that the healthcare profession plays in prevention. We know that for people who attempted suicide, they were seen by a healthcare provider in the year they attempted. They are not always seen for suicidal ideation or self-harm, but some of the signs that someone is struggling can be there. So there is a real opportunity."

Molly Peterson, MPH
Director, adult mental health programs
National Alliance on Mental Illness (NAMI) Minnesota

"It's important for physicians to know the significant role that the healthcare profession plays in prevention. We know that for people who attempted suicide, they were seen by a healthcare provider in the year they attempted," Peterson says. "They are not always seen for suicidal ideation or self-harm, but some of the signs that someone is struggling can be there. So there is a real opportunity."

Part of that opportunity comes when physicians make it a practice to ask patients about their state of mind. It's a common misconception that people shouldn't ask others if they are thinking about suicide for fear that it will give them the idea or encourage them to act, says Christopher Wall, MD, chief medical officer and a child, adolescent, and adult psychiatrist at PrairieCare.

"It's actually quite the opposite," Wall says. "Asking the question helps to open the door that allows for compassion and professionalism and encouragement to seek care. It validates their feelings and allows you to refer as needed to that next level of expertise. Knowing that someone has heard them and has other ideas and resources to help them—that can be a lifesaving moment."

Status of suicide

During the past two decades in Minnesota, the number of suicide deaths per 100,000 people rose by more than 50%, according to the Minnesota Department of Health (MDH). In 2023 and 2024, the rate of people dying by suicide was 13.9 per 100,000 people. An MDH analysis in May revealed several consistent trends:

"Asking the [state of mind] question helps to open the door that allows for compassion and professionalism and encouragement to seek care. It validates their feelings and allows you to refer as needed to that next level of expertise. Knowing that someone has heard them and has other ideas and resources to help them—that can be a life-saving moment."

Christopher Wall, MD
Chief medical officer and child, adolescent, and adult psychiatrist
PrairieCare

- More males died by suicide in 2024 at the rate of 21.6 per 100,000 compared to 6.4 per 100,000 for females.
- The suicide rate in entirely rural counties was twice that of Twin Cities metro counties; from 2019–23, Minnesota's most rural counties had a suicide rate of 19.5 per 100,000 compared to 12.3 in the metro area.
- Minnesotans ages 50–54 and 80–84 had the highest rates of suicide; teens and younger adults saw lower suicide rates in 2024 than 2023.
- Firearms injuries were the leading mechanism for suicide deaths, at 51%—a higher percentage in 2024 than in recent years.
- Native American people die by suicide at the highest rate in Minnesota (24.3), followed by white people (14.4).

There are many factors that go into whether someone is at risk of suicide. The main ones include mood disorders like anxiety, depression, and bipolar, a family history of suicide, experiences with trauma, substance abuse, recent challenges like divorce or job loss, and access to lethal means. The biggest risk for suicide is having untreated or undertreated depression, Wall says.

Based on suicidology research, there has been a shift in how healthcare thinks about the drivers of suicide, says Sandra Rackley, MD, a child and adolescent psychiatrist at Children's Minnesota. When she was in training, suicide was considered the end stage of a depressive illness. Treatment approaches aimed to identify depression earlier and treat the disease medically.

"What we've come to understand is that suicide is not so much a medical problem but a complex human behavior," Rackley says. "There isn't a single cause for suicide.

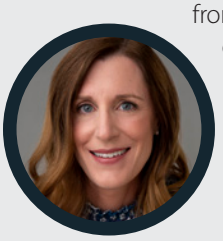
"What we've come to understand is that suicide is not so much a medical problem but a complex human behavior. There isn't a single cause for suicide. It usually happens when a lot of things come together. Suicidal behavior happens in a tough moment when things like emotional pain and stress become really overwhelming. People feel like they can't take it anymore. In that moment they feel so hopeless and alone, and that suicide is a solution to that problem."

Sandra Rackley, MD
Child and adolescent psychiatrist
Children's Minnesota

PHYSICIAN SUICIDE: HELPING THE HEALERS

Demanding hours, high-stakes work, traumatic work experiences, and a fear of acknowledging a need for help—it's no wonder that physicians die by suicide at a higher rate than the general population. Each year, as many as 400 physicians die by suicide in the U.S.

The profession is made up of high-achieving people who take to heart the mantra that the patient comes first. This can make it a challenge for physicians to set boundaries, says Michelle Chestovich, MD, a retired family medicine physician and certified coach at MamaDoc who works with women physicians on burnout. That can lead to physicians to push themselves to the limit, often forgoing their own needs for sleep, exercise, and time to decompress—the self-care that helps them take excellent care of others.



Michelle Chestovich, MD
Retired family medicine physician and certified coach at MamaDoc who works with women physicians on burnout at CentraCare

Rachel Wenner, MD
Dermatologist at CentraCare and advocate for physician well-being

"The stress of our work has grown, and that leads to burnout. WHO [World Health Organization] defines burnout as an organizational problem due to chronic, unrelenting stress. Period. It's not that you are not strong enough. It's just that it's too much," Chestovich says. "I see many people struggling with emotional exhaustion and compassion fatigue, which can contribute to increased depression and anxiety, substance abuse, and horrible relationships. The worst form is suicide."

Many physicians avoid getting mental health support for fear of putting their medical licenses or professional standing at risk. Sandra Rackley, MD, a child and adolescent psychiatrist at Children's Minnesota, emphasizes that in actuality, the biggest threat to physicians' licenses is *not* seeking help when they need it. "You don't have to be Superman. You have feelings too, and feelings need care. There is no shame in that," she says. "Physicians have gotten help, and they find the help helpful."

The medical profession has been working to eliminate the stigma of getting mental health support. Treat Yourself First, a campaign convened and led by the MMA with the support of a coalition of Minnesota-based professional associations, provides resources and encouragement for physicians to reach out for help and encourage colleagues to do the same.

Another important step occurred when Minnesota removed a barrier in its licensure that often discouraged physicians from getting help. The new application now asks whether physicians currently have a condition that is not being appropriately treated, instead of asking about conditions in the past five years—which would often dissuade people from seeking help. The shift now underscores that getting counseling or treatment allows physicians to take care of themselves and process the often emotionally heavy situations they regularly deal with, Rackley says.

Such help has a real impact on medical students and physicians who are struggling, says Molly Peterson, MPH, director of adult mental health programs at the National Alliance on Mental Illness (NAMI) Minnesota. She points to *JAMA Psychiatry* findings that residents who were suicidal and participated in four sessions of cognitive behavioral therapy saw their suicidal ideation decrease by 50%.

"We know when folks get help, the risk and thoughts of suicide go down," Peterson says. "When someone attempts suicide and gets help, they do not go on to die by suicide. Those that are at risk of self-harm and did *not* get help are back to feeling suicidal and are at risk for repeating."

When physicians are struggling, they often feel isolated and unable to talk about what they are experiencing, says Rachel Wenner, MD, a dermatologist at CentraCare and advocate for physician well-being. Opening up avenues for peer-to-peer support is one way to reduce risk for physicians. Whether it's informal conversations or a structured group with clinician therapists, these opportunities to speak about common difficulties show physicians that they aren't the only people struggling with their work.

"The people who seem to be holding it together the best are sometimes struggling the most," Wenner says. "Even if someone appears to be doing fine, reach out regularly and ask people how they are doing. As these conversations become more comfortable, you hope you get a real answer, and it becomes therapeutic."

Peterson emphasizes the importance of physicians looking for signs of emotional distress in colleagues—including exhaustion, irritability, and decreased empathy. They should ask peers how they are really doing and perhaps share how they are feeling, too. "We encourage people to be persistent in asking, letting them know that you care about them, and that others care about them," she says. "That can normalize them getting help."

It usually happens when a lot of things come together. Suicidal behavior happens in a tough moment when things like emotional pain and stress become really overwhelming. People feel like they can't take it anymore. In that moment they feel so hopeless and alone, and that suicide is a solution to that problem."

In a Mayo Clinic study about youth who died by suicide, almost half did not have a psychiatric diagnosis before death. "If we're only looking for depression, we will miss a substantial portion of kids who will die by suicide," Rackley adds.

There is an essential way for all physicians to do their part in identifying people at risk: routinely asking whether patients have thought about hurting themselves, just like they regularly ask whether patients feel safe in their home, says Kathryn Cullen, MD, professor and head of the child and adolescent mental health division at the University of Minnesota Medical School. This is especially important when physicians notice warning signs, such as when the patient is more withdrawn than usual, mentions changes in sleep habits, or shows a change in their function, such as not going to school or work.

"It's always good to ask about suicidal thoughts or behaviors just to make sure we're not missing anything. We want to create the opportunity to offer support. Sometimes a bit of kindness so they can share what's going on can go a long way."

Kathryn Cullen, MD
Professor and head, child and adolescent mental health division
University of Minnesota Medical School

"It's always good to ask about suicidal thoughts or behaviors just to make sure we're not missing anything," Cullen says. "We want to create the opportunity to offer support. Sometimes a bit of kindness so they can share what's going on can go a long way."

Other behaviors to look out for include irritability, engaging in risky behavior, or increasing use of substances, Peterson says. Many times, people will make revealing comments that indicate suicidal thoughts such as, "My family/loved ones would be better off without me" or "I won't be around much longer" or "I wish I could sleep and never wake up."

In such cases, the best practice approach to prevention is to ask people directly, "Are you thinking about hurting yourself?" or "Are you thinking about suicide?" Peterson says. "You can't beat around the bush. You have to be clear and ask the questions. You are showing people that you are someone who is willing to talk about it, and it's okay to talk about it."

Asking these questions can make a real impact. Primary care settings that implemented suicide prevention care—including routinely asking screening questions—saw a 25% decrease in rates of suicide attempts in the following 90 days, Peterson says, highlighting National Institute of Mental Health (NIMH) research.

Such discussions help because they open the door for clinicians to line up support, make referrals to a mental health provider, and engage in safety planning. "If that question doesn't happen, those other things don't happen," Peterson says.

When it comes to youth, physicians also should pay particular attention to social determinants of health, including patients' mental health, whether they have experienced trauma, been exposed to violence in their communities, or if their family is struggling to make ends meet, Rackley says. Just as with adults, it's important to ask whether young people are having suicidal thoughts or making plans to act on them.

Physicians should be aware that there are three stages when it comes to suicide risk, Wall says. There is the idea phase, when people often ruminate on what it might be like if they died or whether life might not be worth living. In the second phase, people begin planning, thinking more specifically about how they might harm themselves. Finally, they will make an attempt.

"One of the things that is really a predictor of dangerous next steps is when people start to feel disconnected and hopeless, when they feel unheard or unseen," Wall says. "Anything a physician can do to connect them with people, connect them with resources, encourage them that there are options and there is hope—these types of things are really important when someone is feeling desperate."

"With completed suicides, when someone takes pills, 5 to 8% of people die. If they use a gun, only 5 to 8% survive. It's just terrible."

Thomas Kottke, MD, MSPH
Retired cardiologist, epidemiology researcher and gun safety advocate
HealthPartners Institute

Next steps

Physicians don't have to be mental health experts to help patients who are at risk of suicide. The MMA Foundation and NAMI Minnesota both offer two free options, both physician-led, for evidence-based training that helps prevent suicide. Question-Persuade-Refer Gatekeeper training is a 90-minute program that prepares physicians to recognize warning signs, then question, persuade, and refer someone for help. Counseling on Access to Lethal Means provides strategies to help at-risk patients and families restrict potential lethal means like guns or pills.

Other assessment options include the Columbia-Suicide Severity Rating Scale and NIMH's Ask Suicide-Screening Questions, Rackley says. The latter provides a screener and safety assessment that can be done in a physician's office. If someone screens positive, it guides clinicians on next steps like assessing urgency for someone to be seen by a mental health professional and making a safety plan.

When someone opens up about their mental health, it's important for physicians to then guide them toward a path for help, Cullen says. Next steps can include involving family members to lend support or helping the patient arrange for a more detailed assessment. If mental health is not the physician's area of expertise, Cullen suggests making a warm hand-off to a colleague so that the patient can be seen as soon as possible and not have to navigate the mental healthcare system on their own.

"You can say to them, 'I'm glad you shared this with me. I care about you and really want you to get the support you need. Would you please talk to this person I'm going to tell you about?'" Cullen says. That personal touch that opens doors to quick support helps "because it can be hard for patients to figure it out on their own. And then they don't have to wait months to be seen."

Physicians also can access FastTrackerMN(fasttrackermn.org), a searchable service locator with more than 600 mental health and 400 substance-use disorder services across the state, organized by health plan so patients don't pay more for a provider who is not in network. It offers real-time availability estimates for each provider.

Another a vital part of preventing suicide involves finding a way to remove the means for self-harm. Research shows that suicide tends to be an impulsive act. If lethal means are not readily available, it can make a world of difference, says Thomas Kottke, MD, MSPH, a retired cardiologist and epidemiology researcher at the HealthPartners Institute who advocates for safe gun storage. It's critical that people lock their guns safely away and normalize asking people whether they do because of guns' significant role in suicide.

"With completed suicides, when someone takes pills, 5 to 8% of people die. If they use a gun, only 5 to 8% survive. It's just terrible," Kottke says. He urges physicians to routinely ask patients whether their families' guns are securely stored, and for people to normalize asking the question when they or their children are going to someone else's home. "It's a population approach and herd immunity if all the guns are locked up."

Everyone has the ability to make a difference for others who are at risk of suicide. As trusted caregivers, physicians can play an especially critical role. "It's important to give people hope," Cullen says. "People can feel like there is no way things can get better. But it's not true—things can get better. It doesn't take a miracle; it just takes time and human connection. We have to help our patients through this dark time and see the other side of it, be present with them, and give them hope." MM

Suzy Frisch is a Twin Cities freelance writer.

Physician-focused resources

Treat Yourself First

Emergency and physician-specific resources.

https://www.treatyourselffirst.org/resources-1

Physician Support Line

Free, confidential support from psychiatrists for fellow physicians and medical students. https://www.physiciansupportline.com

Vital Signs

Suicide prevention resources and more.

https://npsaday.org/share-suicide-prevention-resources

MMA and MMA Foundation resources

Local, national, and emergency assistance for physicians.

https://www.mnmed.org/resources/practice-well-collaboratory/i-need-help

Physician-led suicide prevention training

https://www.mnmed.org/about-us/mma-foundation/our-initiatives/suicide-prevention

Suicide and crisis lifeline

Dial or text 988 or using chat services at 988lifeline.org to connect with a trained crisis counselor, or text NAMI's Crisis Text Line at 741741.

Two views on secure firearm storage counseling

It's important that physicians counsel patients on gun storage, but research shows it happens infrequently.

BY THOMAS E. KOTTKE, MD, MSPH

The American Academy of Pediatrics, the American Academy of Family Medicine, the American Medical Association, and the United States Preventive Services Task Force all recommend that physicians counsel their patients to store their firearms securely, that is, locked and unloaded with ammunition locked elsewhere. By contrast, published studies have reported that this counseling occurs infrequently. Regardless of the barriers to counseling that individual physicians are experiencing, I believe that it can be helpful to read the words of colleagues who are successfully integrating safe storage counseling into their busy primary care practices.

Recently, I had the opportunity to interview several primary care physicians who routinely counsel their patients to store their firearms securely. I interviewed Scharazard Gray, MD, in October 2023 and Grace Totoe, MD, FACP, in September 2024. Gray practices in International Falls and Totoe practices in Golden Valley.

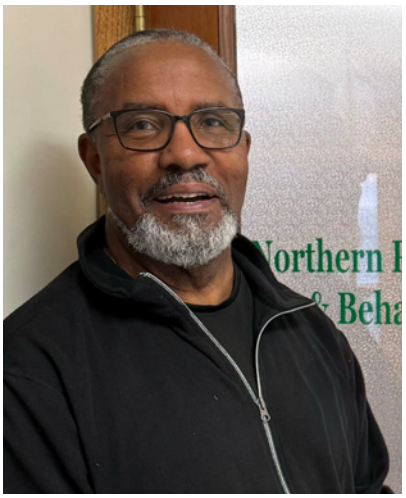
They told me that counseling can be delivered quickly and, if focused on keeping children safe, patients are open to the advice. They don't talk Second Amendment. They also don't try to change the mind of a patient who doesn't want to hear about locking up their firearms. They move on to the rest of the visit. They don't argue. Gray uses gun locks as a prop, displaying them for patients to both take and take the hint.

Totoe and Gray gave me permission to publish in *Minnesota Medicine* edited excerpts from my interviews with them. Their own words follow. (Thanks to Juliana Milhofer, JD, manager of public health policy and community health partnerships for the Minnesota Medical Association, for arranging the interviews.)

Why is addressing safe firearm storage a priority for you in your practice?

GT: Well, there are a lot of safety issues regarding guns. It impacts the African American community, which I am a part of, so this is something that is part of what I have to live with. And in my practice, I see a lot of patients that are affected by this. I see a huge population of African Americans for Social Security disability. A lot of the applicants have at one point been shot, and there's also a huge population that have mental health problems. If they have guns at home, you just

Grace Totoe, MD, FACP
Golden Valley



Scharazard Gray, MD
International Falls

have to address it. It's important that it's addressed, because it has a bearing on the safety of the community.

SG: Suicide, that's one. Also, safety around firearms was emphasized from my childhood in the home, through the military, and beyond. Firearm safety was enforced. It's just second nature. Another thing, it's about kids and safety as well and just having a safe home.

> For every patient that we do an extensive history and physical on, or if it's a wellness visit, I pull out my United States Preventive Services Task Force calculator, and we go through the list. [Gun safety]also comes up when I ask about social determinants of health and I do my PHQ-9 [Patient Health Questionnaire-9].
>
> Grace Totoe, MD, FACP | Primary care physician | Golden Valley

Do you distribute any gun or firearm storage devices to your patients?

GT: No, not at this time, but I recently met the CEO of a nonprofit who will be getting me safety boxes, so I should soon have the capability of distributing lock boxes.

SG: I have a trigger lock right here in my hand. I happen to be a veteran as well, so we have a big push for veteran safety and suicide. So, we get them, we pass them out, you know. This particular supply came from the VA.

Do you ask all patients about guns, firearms? If not, how do you select which patients you ask?

GT: We do for every patient that we do an extensive history and physical on, or if it's a wellness visit, I pull out my United States Preventive Services Task Force calculator, and we go through the list. It also comes up when I ask about social determinants of health and I do my PHQ-9 [Patient Health Questionnaire-9]. So invariably it does come up.

SG: It's simple and straightforward. I have trigger and slide locks in a basket on display. And I usually have them on the counter as people come in and out. Sometimes they either ask, "Oh, can I have some of these?" Or I may ask if they have kids in the house, they say, "Yeah, how many can I have?" And that's the end of it, right? So, I don't really say much. I just show them, and they grab a few if they have guns in the home and stuff. So, it's simple that way.

How long does the conversation with your patients typically take?

GT: It's typically not exhaustive unless we uncover something that's concerning. Then I need to make a decision about what to do with the information. If I'm not getting any warning signs, it doesn't take too long.

SG: As I said, it's not much of a conversation. I can say, "Do you have any kids in the house, or do you have any guns in the house?" Something like that. It's a simple question. Sometimes they'll look at the locks out there to be taken and bring it up, but it is brief—less than a minute. I focus strictly on the safety part.

> [Gun safety conversations are] simple and straightforward. I have trigger and slide locks in a basket on display. And I usually have them on the counter as people come in and out. Sometimes they either ask, "Oh, can I have some of these?" Or I may ask if they have kids in the house, they say, "Yeah, how many can I have?" And that's the end of it, right?
>
> Scharazard Gray, MD | Primary care physician | International Falls

What would you say to a clinician who hesitates to start this conversation because they don't feel they have adequate time for it?

GT: I don't think that it's an option. I think it should be part of the practice. I think it's a must that we incorporate in our practice because it's an important issue. It's almost as important as telling them to go get their colonoscopies. That's my opinion. I mean, that's what I would tell them if they told me they didn't have time. It shouldn't have to take too much of your time, and if you do have to spend time on it, it means that this person probably should be sent to the ER, right?

How do your patients react to this conversation.

GT: I've had a few people applying for disability who have been taken aback and ask what this has to do with their disability application. Then I will take my time and explain to them it's a general recommendation for safety of the kids and the people around you. Once you take your time and explain it in a nonthreatening way, I think people get it. I don't broach the subject in an accusatory way. It's more in a conversational way.

SG: That's the neat part about it. You can see the enthusiasm and everybody is on board, particularly if you say something about kids.

How do you respond to patients who react negatively?

GT: I'm calm and conversational, and if they don't want to talk about it, I might just document my findings. But so far, I haven't had anyone who has reacted ad-

versely. That's because I don't approach it in an accusatory manner.

SG: I haven't had that other than they don't have any weapons in the house. I just haven't had a negative reaction. The focus is on safety. We don't go Second Amendment or all that other stuff. No NRA talk or any of that other stuff.

What is the message that you relate to your patients in the conversation about safe gun storage?

GT: I talk to them about the safety of kids and people who may not have knowledge about how a gun is used. I frame it to promote safety.

SG: Safety.

Do you ever discuss removing guns from the home?

GT: I don't discuss whether it's beneficial or not beneficial to have a gun. If somebody is depressed and they tell me that they have a gun, in addition to making sure that the gun is stored, I would ask who has access. Otherwise, I don't think that's my place, so I don't go there.

SG: Yeah. Well, in the context of suicide with veterans, if they are in a certain state of mind some of them have enough, should I say, insight and show good judgment. In collaboration with the Koochiching County Warrior Initiative, we have a community safe storage place here in town so veterans can go and turn in their weapons. We made the request to the Koochiching County Sheriff's Office, and they approved it. We bought the safe, got it in there, and it's up and running in the sheriff's office.

COMMENT FROM INTERVIEWER THOMAS E. KOTTKE, MD, MSPH: Let me summarize what I heard our two colleagues say: Focus on safety for kids, that's a hard concept to blow off. If the patient doesn't want to hear the message, let it go; most likely there will be an opportunity to counsel again. Leaving gun locks out in the patient waiting area or the exam room tells patients that firearm safety is important to you and them. Parenthetically, locks are available from the Minnesota Department of Public Safety and Protect Minnesota (protectmn.org). The Minnesota Department of veterans affairs also will send gun locks to veterans.

If you already routinely counsel your patients to store their firearms locked and unloaded, thank you. If you don't yet do this, please try doing it as doctors Totoe and Gray do. I believe that you will find that your workday easily accommodates safe firearm storage counseling. Your patients and their families will certainly be safer when you do. MM

Thomas Kottke, MD, MSPH, is a member of MMA and has advocated for innovations that improve health for 50 years. He has served on the board of directors of Protect Minnesota and continues to promote secure storage of all firearms.

Minnesota Medicine welcomes features, commentaries, and other contributions from members. Pitch ideas to the editor at mm@mnmed.org.

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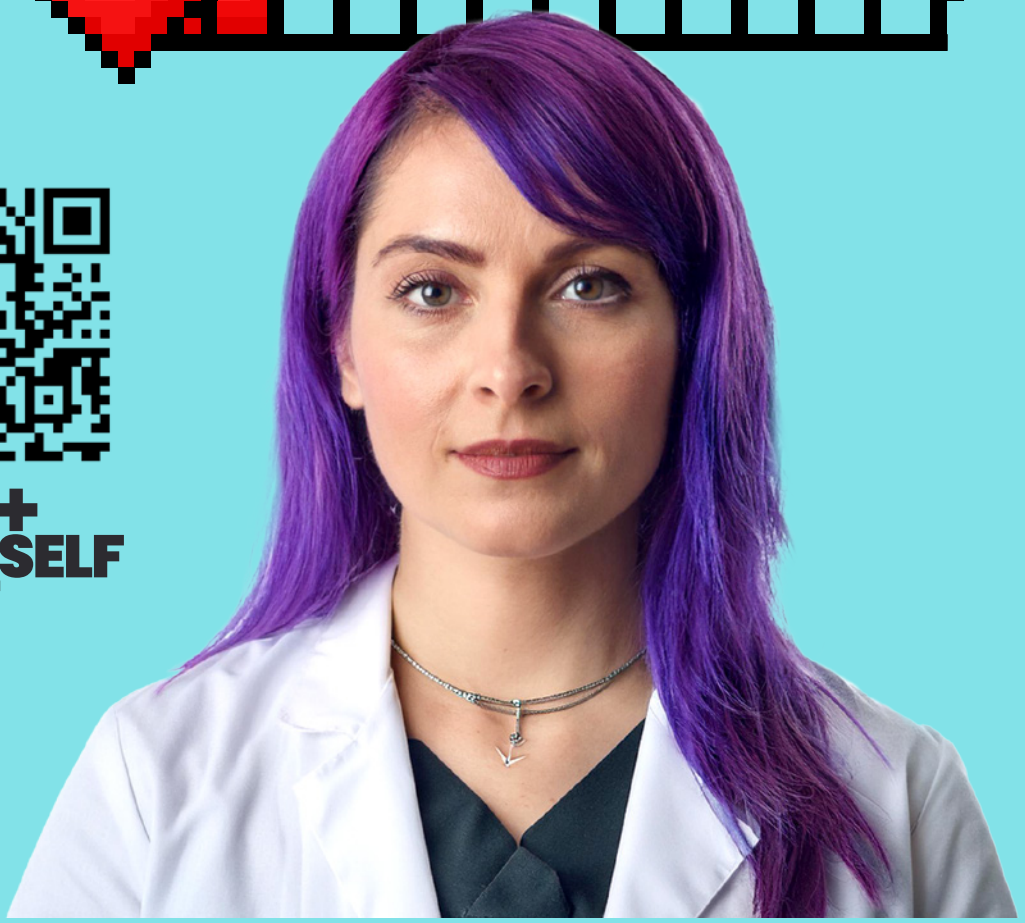

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WHAT ARE ULTRA-PROCESSED FOODS, AND WHAT SHOULD YOU TELL YOUR PATIENTS ABOUT THEM?

Explaining ultra-processed foods and their associated risks to patients can be complicated.

BY ANDY STEINER

The research is clear: Eating too much ultra-processed food is bad for your health. And while most physicians understand the importance of counseling their patients about this risk, too many don't actually have the background needed to explain what ultra-processed foods are and why they should be avoided.

Looking for a clear definition of ultra-processed foods? Job Ubbink, PhD, professor and head of the University of Minnesota's Department of Food Science and Nutrition, is the man for the job. Beyond his academic scholarship, he's a physical and polymer chemist with a career in the food industry, including 11 years at the Nestlé Research Center in Lausanne, Switzerland.

Ubbink explained that the most precise definition of ultra-processed foods is based on the NOVA food classification system, developed by a team of researchers at the University of Sao Paulo led by public health professor Carlos A. Monteiro. The NOVA system, Ubbink said, separates foods into four categories, with unprocessed foods like fresh fruits and vegetables and minimally processed foods like flaked oats, pasteurized milk and juices and milk powder, at one end, and ultra-processed foods, like candy bars, frozen pizzas and microwavable meals at the other. In the middle category, one then finds the regular processed foods, such as cheese or cured meats, bread and canned tomatoes.

Ubbink likes to use this description: "Ultra-processed foods are created using processing tools that you don't find in your home kitchen with industrial ingredients you wouldn't recognize." The NOVA definitions help to further define foods' level of processing, he continued. "If you look at the NOVA definitions, a simple potato chip, for instance, it's just made out of sliced potatoes. So that would be, in my opinion, a processed food. But if you made the chip into something like Pringles—from potato starch and maltodextrin and a binder—then it would become a category 4, or ultra-processed food."

It is hard to avoid all ultra-processed foods. They are ubiquitous in our modern diets. According to the Centers for Disease Control and Prevention, 53% of the calories American adults consumed each day between 2021 and 2023 were from ultra-processed foods.

Ultra-processed foods are unhealthy as a group because many contain an abundance of ingredients such as sugar, dietary sweeteners, salt, and unhealthy fats that most people should be eating less of. And they are often designed with ingredients to be hyper-palatable, in a way natural foods are not, to encourage people to eat more. A Lay's potato chip ad from the 1960s challenged viewers, "Bet you can't eat just one."

Ultra-processed foods are unhealthy, Ubbink said, "because they are formulated to be unhealthy. A food developer makes choices about what to put in or what not to put into a food. If you add a lot of sugar to your breakfast cereal, kids or adults will eat it. We love salty snacks because a good level of saltiness helps people to eat more of the stuff."

And because ultra-processed foods are de-structured through intensive processing, they are easy to digest: Carbohydrates and sugars are absorbed into the body quickly, which can lead to health maladies like type 2 diabetes and obesity.

So does it make sense use a system like NOVA to warn people off "ultra-processed foods" as a group? Or is it better to warn instead about specific culprits—abundant sugar, salt, fat, and lack of fiber?

Ubbink explained that NOVA was a public-health driven study that sought to classify foods in response to what was seen as a cultural shift in Brazil away from home cooking based on classic food ingredients toward more convenience foods, such as cookies, ready meals, and processed meats. Ubbink said there is merit in defining foods in that way, but also feels that these definitions can become absolute in a way that further confuses our relationship to food. The NOVA system is furthermore inconsistent in how individual foods are classified. He said it is important to develop—and for physicians to encourage—a healthy relationship to food that emphasizes fresh and minimally processed foods but also accepts a healthy balance of foods in the diet.

Balance and moderation is key. "We need processing," he said. "We need innovation in processing. Very often processing makes a product more stable, safe, healthy, sustainable. What we want to avoid is bingeing on formulated products which contain loads of sugar, salt, refined flours, and saturated fats."

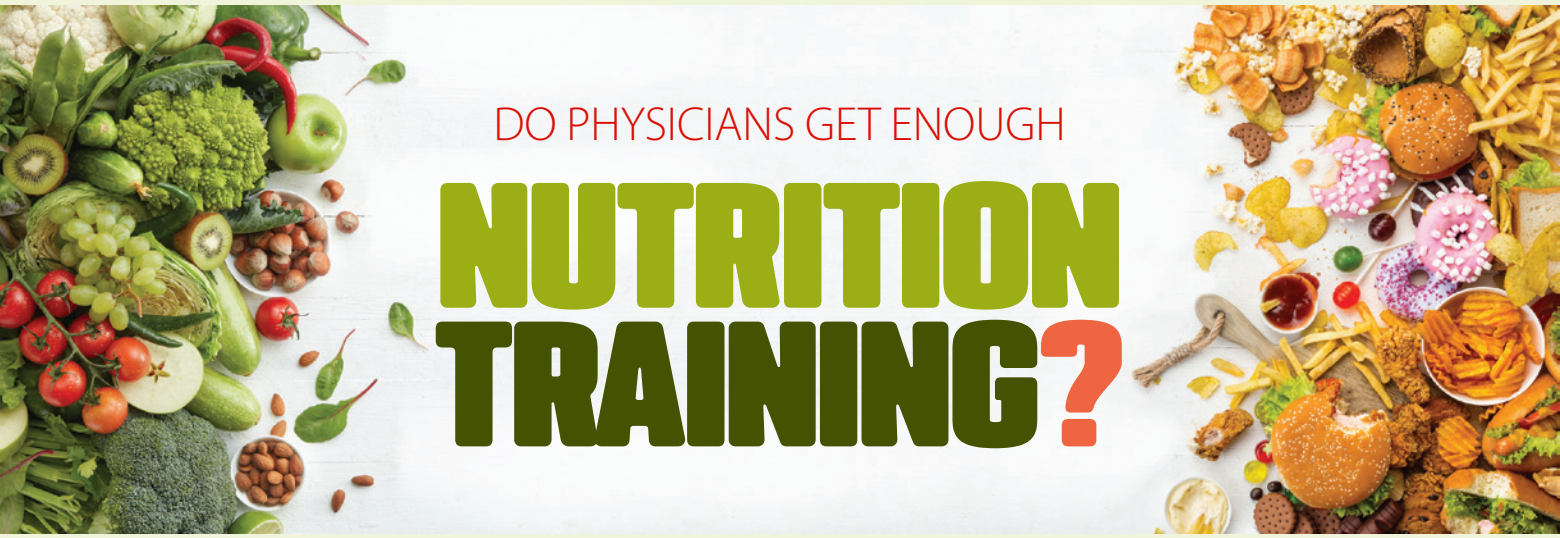
Ubbink believes that while overconsumption of ultra-processed foods is bad for your health, some can be part of a normal diet. "Don't eat too many candy bars or frozen pizza," he said. "Don't binge on sugared breakfast cereals. But ultra-processed foods, when eaten in moderation, can fit into a healthy food pattern. An occasional treat or indulgence is part of life." But he also emphasizes that the industry is currently overdoing it—ultra-processed foods are aggressively marketed and can be purchased almost anywhere, anytime.

Legislating change

Some countries, including Mexico and Chile, have worked to minimize the risks of ultra-processed foods, introducing laws to require front-of-pack labels warning of excess calories, sugar, saturated fats, and salt. In the United States, a proposal to similarly label ultra-processed foods is under consideration by the FDA. And

Job Ubbink, PhD
Professor and head
Department of Food Science and Nutrition
University of Minnesota

"Ultra-processed foods are created using processing tools that you don't find in your home kitchen with industrial ingredients you wouldn't recognize. If you look at the NOVA definitions, a simple potato chip, for instance, it's just made out of sliced potatoes. So that would be, in my opinion, a processed food. But if you made the chip into something like Pringles—from potato starch and maltodextrin and a binder—then it would become a category 4, or ultra-processed food."



DO PHYSICIANS GET ENOUGH

NUTRITION TRAINING?

Historically, in medical schools, nutrition was considered the realm of dieticians, not physicians. What people ate was something separate and less important than treating disease, the belief went—which was what doctors should be focused on.

This separate-but-not-equal perspective lasted for decades, and meant that most medical students received little if any training on diet and nutrition. The only way most patients ever saw a dietician was after they'd been diagnosed with a medical condition like heart disease or diabetes that could be improved by changes to their diet. Typically, physicians paid little attention to what their patients ate in the buildup to the diagnosis, instead focusing on treating the symptoms.

"Like a lot of physicians, I didn't really learn a ton about nutrition in medical school or residency," said Kate Shafto, MD, associate professor of internal medicine at the University of Minnesota Medical School's Twin Cities campus. "Twenty years ago there also was not nearly as much in the public dialogue about nutrition."

When she was in medical school, Jen Pearson, MD, associate professor at the University of Minnesota Medical School's Duluth campus, said that most of the nutrition education she received was biochemically based. "We learned about vitamins and minerals and the fundamental elements of nutrition. What was lacking was how to translate this knowledge to the bedside care of patients."

Would-be doctors are required to "cultivate the knowledge on how to treat disease," Pearson said, but what is often missing is a more nuanced understanding and incorporation of the role of food and nutrition in both health promotion as well as disease management.

"There is a recognized gap in nutrition education," Shafto said. For decades, academics have been arguing for more nutrition education for physicians. "As far back as the '70s, people were writing papers about how there is not enough nutrition education for doctors," she said.

In recognition of this gap, there has been a movement in Washington to influence change in physician education. In 2022, a resolution was passed in the U.S. House of Representatives to recognize the burden of diet-related disease.

"It called for an increase in nutrition education in medical programs," Pearson said. "The purpose of that resolution was to raise awareness of the state of diet-related health conditions in the United States and of the important role of medical professionals in guiding patients toward improvements in food choices."

Curriculum changes at the University of Minnesota Medical School aim to expand students' nutritional knowledge base from what was offered in the Legacy curricula, making clear connections between diet and disease prevention and management.

The school's new SERVE curriculum, introduced in the 2023–24 academic year, will be rolled out over four years, explained Pearson. Traditionally, the U's nutrition curriculum was biochemistry-based, she said, "with some sprinkles of nutrition- related topics, such as within the discussion of diabetes."

The Medical School's new curriculum features "a thread called Life Stages," which includes information on foods, food systems, and nutrition, Pearson said. "Within that thread we made a concerted effort to try to expand on what was previously done in the Legacy curriculum."

These updates set the University of Minnesota apart from many other medical schools, Pearson said. "There are some medical schools that have adapted curriculum within this domain of food, food systems, and nutrition. Other medical schools have not. What we've done is fairly novel with the expansion of this content. We're hoping that it will make a significant difference in our future physicians' ability to incorporate more nuanced food and nutrition conversations into the bedside care of patients."

Jen Pearson, MD
Associate professor
University of Minnesota Medical School
Duluth campus

"Food and nutrition play so profoundly into the global burden of disease that in order to have the impact that we hope," she said, "we need to better understand the important role that food and nutrition play in what we do as physicians."

the UK has implemented a "sugar-tax" on heavily processed products that state the risks associated with their consumption.

Ubbink acknowledges that in the United States, with its high rates of obesity and other chronic illnesses, change is necessary. "I think something needs to happen," he said. "That could be a regulation or a warning on front-of-pack labeling, or limits on the marketing of ultra-processed foods." California recently became the first state in the U.S. to ban from school lunches "particularly harmful" ultra-processed foods, including soda, energy drinks, and other foods high in sugar or salt and low in nutrients.

Ubbink believes that warning labels, while helpful for education, won't be what helps most Americans move their diets in a more healthy direction. He and his colleagues at the University of Minnesota believe that physicians can play a central role in helping their patients understand how the foods we eat impact our overall health.

"We love it when physicians have a bit of a grounding and background in nutrition," Ubbink said. "Unfortunately, they get very little of it in medical school." Too often, he said, physicians rely on medical fixes to existing health problems, rather than encouraging important lifestyle changes that could stop problems before they start. "We need medication to manage disease, but we also need to understand that lifestyle changes around diet is really crucial. It would be wonderful if more physicians understood that."

Jen Pearson, MD, associate professor at the University of Minnesota Medical School, Duluth campus, has played a central role in the expansion of the nutrition curriculum offered to students on the school's three campuses.

"Food and nutrition play so profoundly into the global burden of disease that in order to have the impact that we hope," she said, "we need to better understand the important role that food and nutrition play in what we do as physicians."

How it works in practice

In the abstract, it's easy enough to explain NOVA classifications and food-processing ingredients, but how does this knowledge easily translate into everyday medical practice?

As a family physician at M Health Fairview Clinic—Rice Street in St. Paul, Laurel Ries, MD, has a deep understanding of the careful stance that many doctors have to take when speaking with their patients about nutrition and health. She understands that, for a multitude of reasons, not everyone can or wants to completely cut ultra-processed foods from their diets.

Laurel Ries, MD
Family physician
M Health Fairview Clinic—Rice Street
St. Paul

"For many people, having some ultra-processed foods once in a while is part of a sustainable nutrition plan. I tell people, 'You don't completely have to cut these foods out of your life, but have them less often and in smaller portions.' Good nutrition has to be sustainable if you want those habits to stick, Ries believes. "If you tell people they can never have ramen noodles or sugary cereals again, that just won't work."

When physicians come to nutrition discussions from a preachy perspective, patients can feel talked-down to or even turned off. Instead, Ries said she tries to approach conversations about diet and ultra-processed foods from a more realistic perspective.

"Ultra-processed foods are designed to be highly palatable," Ries said. "There's a lot of brain-reward systems built into the design of ultra-processed foods. It is difficult for a lot of people to completely avoid them."

Because of these foods' ever-presence in our culture, Ries said she tends to talk to her patients more about moderating the amount of ultra-processed food in their diets, rather than completely eliminating them.

"For many people, having some ultra-processed foods once in a while is part of a sustainable nutrition plan," Ries said. "I tell people, 'You don't completely have to cut these foods out of your life, but have them less often and in smaller portions.'" Good nutrition has to be sustainable if you want those habits to stick, Ries believes. "If you tell people they can never have ramen noodles or sugary cereals again, that just won't work."

Instead of telling her patients what not to eat, Ries said she instead focuses on talking about what foods are good to eat. Most people know that over-consumption of ultra-processed foods increases the risk of obesity, heart disease, diabetes and cancer. But many aren't clear about just how to access food that is better for them.

"I try to emphasize what people want to do. We have conversations about what it looks like in daily life and how challenging it is to eat five fruits and vegetables a day. We talk about plant proteins," Ries said.

Kate Shafto, MD, associate professor of internal medicine at the University of Minnesota Medical School Twin Cities campus, said that the way physicians approach conversations about food and nutrition is important.

"Ultra-processed food is a huge part of what many Americans are eating," Shafto said. "If physicians don't understand what ultra-processed foods are and their implications for disease progression, they cannot guide patients toward more nourishing, lower inflammatory dietary patterns. It is important to make the connection between a person's health and what they eat day to day, with nuance and compassion."

In some lower-income communities, minimally processed food can be harder to find and more expensive than ultra-processed food. Ries said that many of her patients tell her they struggle to afford or access fresh fruits and vegetables and meat products.

"I have people telling me about how it is easier to afford ramen than it is to get other things. It is hard to get to the grocery store because of transportation challenges. It can be harder for some people to eat unprocessed foods because of shelf-life and stability. You can get a huge bag of white rice for less and it will keep your family full for less money."

Ries said she approaches this conundrum from a "no-guilt" perspective. She listens to her patients' concerns, and tries to respond in a nonjudgmental manner.

"We don't expect anybody to be perfect," Ries said. "We just say, 'Let's make an incremental move.' If you are eating ramen, try to have a piece of fruit or a vegetable on the side. Let's make it more accessible to where you are in your life right now.' My personal bent on nutrition education has a more positive focus."

She also understands that dietary recommendations shift, and this can be confusing for patients. "Eggs were considered bad for you 20 years ago," she said. "Now we say eggs are a healthy food. People are always trying to figure out what's healthiest for them."

As with all things in her medical practice, Ries works to understand that everyone—herself included—is imperfect. It's her job help her patients make the best decisions they can for their health.

"I have a few patients who eat perfectly, but they are incredibly rare," Ries said. "Most of us do not eat perfectly. We all try to do the best we can." **MM**

Andy Steiner is a Twin Cities freelance writer and editor.

Kate Shafto, MD
Associate professor of internal medicine
University of Minnesota Medical School Twin Cities

"Ultra-processed food is a huge part of what many Americans are eating. If physicians don't understand what ultra-processed foods are and their implications for disease progression, they cannot guide patients toward more nourishing, lower inflammatory dietary patterns. It is important to make the connection between a person's health and what they eat day to day, with nuance and compassion."

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TECH THE GOOD WITH THE BAD

Medical technology is often seen as a villain, but two studies show how it might reduce physician burnout.

BY GREG BREINING

Technology in the form of electronic health records often takes some blame for the rising incidence of physician burnout. Note-taking for the sake of records is tedious and time-consuming, and pertinent details can get buried in an avalanche of irrelevant verbiage.

But a couple of recent studies, both published this year in *JAMA Network Open*, show that tech may indeed provide answers to combatting physician burnout. In one, researchers at Mayo Clinic and the University of Colorado School of Medicine showed that by wearing and referring to smartwatches, physicians can reduce burnout and improve resilience. In the second, researchers at Mass General Brigham, Harvard, and Emory Healthcare in Atlanta demonstrated that so-called ambient documentation technology, which uses AI to summarize patient visits, can dramatically improve physician well-being.

"Oftentimes, I think when clinicians hear the words technology in healthcare, there's a bit of an allergic reaction to those words together," says Jacqueline You, MD, MBI, primary care physician and digital clinical lead at Mass General Brigham, the corresponding author of the documentation study. "I think that it was really exciting to see that we have a technology solution that can be used to address the major, major issue of clinician burnout."

"Bad tech, poorly designed tech—and this is where electronic medical records have been impugned so much—actually pulls us away from what's most meaningful to us. It's a distraction," says Colin West, MD, PhD, professor of medicine, medical education, and biostatistics at Mayo Clinic and an author of the smartwatch study. "Most people are not advocating in medicine for going back to the days of unsearchable paper records that are, you know, stored in a basement of a building someplace with ink and handwriting that no one can read. Physicians are not anti technology. We use fancy tech all day, every day in our work. We're anti bad technology."

Says West, "A wearable device, if it gives you information that you can act on to help you be more present and feel

healthier and then you can bring that back to be more present and engage with your patients, that actually can promote meaning, values, and purpose, and so it can be good tech."

The problem of burnout

Burnout is a big deal—for U.S. healthcare generally and for physicians individually. Half or more of U.S. physicians experience burnout, a rate higher than in the labor force generally. Burnout reduces quality, safety, and cost of care. It increases odds of quitting a job or cutting back hours, adding billions of dollars each year to the cost of U.S. healthcare, according to various studies. Physicians experiencing burnout have a higher than usual risk of alcohol use disorder, suicidal ideation, and motor vehicle crashes.

Reformers seeking to reduce burnout often look to nontechnical solutions, from organizational changes to increase physician autonomy to modifying individual behavior, such as taking more personal time.

Researchers at Mayo Clinic and the University of the Colorado School of Medicine took a more tech-oriented tack. They recruited 184 physicians from the two institutions and randomly divided them into a smartwatch intervention arm and a "delayed intervention" arm. Subjects in the first group received a Garmin Connect smartwatch and instructions for setting up linkages with the corresponding app. They also received reminders to sync their smartwatch data, information about smartwatch features, and aggregated statistics of data collected from the smartwatches.

Participants in the second arm got nothing for the first six months. They then received a Garmin watch and supporting information.

For all participants, smartwatches tracked heart rate, activity, respiratory rate, stress levels, and sleep patterns. Participants in both arms were surveyed at three, six, and 12 months to assess burnout, emotional exhaustion, depersonalization, resilience, and quality of life.

Colin West, MD, PhD
Professor of medicine, medical education, and biostatistics at Mayo Clinic and an author of the smartwatch study

"My view of the tech here is, it's not the tech itself making changes directly. What it's doing is acting as a lens to give us a clearer view individually on where we might be able to make improvements that will help us with our well-being, within things that we actually can control. One of the common issues among physicians, partly because we tend to be busy and partly because our focus often is outward rather than inward, we're not really very good at recognizing where we are on our own personal stress curves from moment to moment, let alone, over weeks or months."

Smartwatch wearers "had lower burnout and higher mean resilience scores at six months," according to the report. "Based on previously observed associations, the 54% reduction in the odds of overall burnout at six months observed in this study could lead to meaningfully lower rates of self-reported medical errors, malpractice litigation, and turnover and lost productivity, along with reduced associated costs to health systems and society. The improvement in resilience score exceeded that observed in previous intervention studies."

The conclusion: "The findings of this randomized clinical trial suggest that wearing a smartwatch can reduce burnout and improve resilience among physicians."

"My view of the tech here is, it's not the tech itself making changes directly. What it's doing is acting as a lens to give us a clearer view individually on where we might be able to make improvements that will help us with our well-being, within things that we actually can control," says West. "One of the common issues among physicians, partly because we tend to be busy and partly because our focus often is outward rather than inward, we're not really very good at recognizing where we are on our own personal stress curves from moment to moment, let alone, over weeks or months."

Studies have shown that burnout is related to a loss of control or agency. "My speculation is that having access to these physiologic data gives people a point of control," says West. "They have information they can act on themselves, and they're not just sort of at the whim of the currents around them. Suddenly, they have a little bit of solid ground under them, even if it seems modest."

No-hands note-taking

A second study examined the efficacy of a developing technology that is trying to relieve the documentation burden directly. Researchers at Harvard, Mass General Brigham, and Emory Healthcare conducted a survey study of clinicians who used "ambient documentation technology," which "uses the combination of natu-

ral language processing, large language models, among other technology that generates a draft based on the conversation that a clinician is having with the patient in real time," says Jacqueline You. The technology began to appear commercially about three years ago. The researchers studied the effects of Nuance DAX Copilot and Abridge at Mass General Brigham and Abridge at Emory.

As a result, physicians don't have to try to take notes when visiting patients or reconstruct visits from memory in order to write a summary. Unlike voice recognition software, which transcribes *everything* (and not always accurately), ADT strips out irrelevant chit-chat to produce a concise summary of relevant clinical information, which the physician must review, edit as needed, and approve.

"The clinician takes out their phone, gets permission to do the recording, and starts to just have a regular clinical encounter," says You. "After you finish recording, that's when the software generates a draft note in real time—within a minute is what I've seen in my experience."

Prior studies have shown that the documentation technology can cut time spent in writing summaries, increase clinician time with each patient, improve productivity, and improve the quality of documentation. But do those benefits translate to reduced burnout? That's what You and colleagues wanted to address.

At Mass General Brigham, the researchers administered surveys to clinicians at the beginning use of the ADT, at the 42-day midpoint of the study, and at the completion of the 84-day study period. Emory clinicians were surveyed at the beginning and again at the end of the 60-day study period at that institution. Participants were asked about their use of the technology. They were also queried on burnout and well-being.

At Brigham, "ADT use was associated with a 21.2% absolute reduction in burnout prevalence, while at Emory, ADT use was associated with a 30.7% absolute increase in documentation-related well-being prevalence," according to the study. In a press release, study co-senior author

Jacqueline You, MD, MBI
Primary care physician and digital clinical lead at Mass General Brigham, the corresponding author of the documentation study

The burden to remember or to take notes is so great that some physicians face their summaries with "palpable dread," You says. But with the new technology, they have gone from being chronically behind in note-taking to finishing their notes with time to spare. Says You, "That is the sort of relief that we've seen with some of our clinicians who use the technology, and that's really powerful."

Rebecca Mishuris, chief medical information officer at Brigham, said, "There is literally no other intervention in our field that impacts burnout to this extent."

You attributes the effectiveness to reducing the "cognitive load…. Even the best clinician, after you see 20 patients in a day, is not able to necessarily remember every last bit of conversation that they had."

The burden to remember or to take notes is so great that some physicians face their summaries with "palpable dread," You says. But with the new technology, they have gone from being chronically behind in note-taking to finishing their notes with time to spare. Says You, "That is the sort of relief that we've seen with some of our clinicians who use the technology, and that's really powerful."

Many other attempts to address physician burnout "are A, difficult to sustain or B, difficult to scale financially," says You. "Some smaller studies have shown that in-person scribes can help with some of the documentation. But you can imagine that, financially, that's difficult for us to get every single doctor in the country to have a person trailing them and scribing everything that happens during their clinic day. So something like ambient documentation is much more scalable… and from a maintenance perspective is more sustainable."

Future research should focus on whether these salubrious effects are sustained over time, and second, whether improvements in physicians' well-being translate to patients. "You could hypothesize that if someone is able to spend more time talking about clinical matters instead of focusing on typing, maybe that does have some downstream impact on the patient's health as well," she says.

The potential benefits to physicians were immediately obvious, You says. "I think this is the first time we've had people come to us and say, 'Oh, I'm excited to use this.' Or, 'You know, tell me more about this.'"

Says You, "I think we're at a time where we are trying to think about, how does AI in general work in healthcare? What are the best ways that it can help our clinicians and be more of an aid, and enhance what we do, which is providing patient care, rather than something that adds to the many things that clinicians already have to juggle on a daily basis." **MM**

Greg Breining is editor of *Minnesota Medicine*.

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TOOLS & RESOURCES

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The CoP brings together health equity leaders and professionals from Minnesota medical practices to exchange expertise, resources, and ideas. It provides an opportunity for networking, cross-organizational communication, and collaboration. The CoP also guides the work of MMA by providing input on health equity priorities and identifying opportunities for collective action in support of health equity. The CoP meets quarterly and interested physicians may join at any time.

To attend a CoP meeting, contact Haley Brickner.

Intercultural Development Inventory

The Intercultural Development Inventory (IDI) is a developmental assessment which provides in-depth insights on individuals' and group's levels of intercultural competence. The IDI process empowers participants to increase their intercultural capability.

The IDI can be used by individuals to receive feedback and recommendations and by organizations for baseline assessments, organizational development, or as a pre-post assessment in program evaluation.

The MMA now offers this valuable resource, including:

- IDI Assessment
- Individual Profile Report
- Group Profile Report
- Customized Intercultural Development Plan
- 1:1 Debrief/Coaching sessions with a qualified IDI Administrator

Learn more at www.idiinventory.com and contact Haley Brickner to start your IDI process.

Best Practices for Inclusive Communications – Training and Guide

The words we use can either promote a culture of respect and inclusion or perpetuate harm toward marginalized individuals and communities. As we work to promote an anti-racist culture in medicine, we must also examine the way we speak about people and groups. As language and culture change over time, it is our responsibility to stay up to date on best practices for communicating about health equity. The MMA offers training for organizations on Best Practices for Inclusive Communication, enabling participants to use more inclusive communication by providing suggested language, guidance, and explanatory context, and encouraging them to think critically about the words they use, the meaning conveyed, and the potential impact.

The training accompanies the free Inclusive Communication Guide, which can be found at www.mnmed.org/healthequity

Implicit Bias Training (CME available)

Research suggests that implicit biases contribute to health disparities by affecting patient relationships and care decisions.

The MMA offers health care providers several ways to learn about Implicit Bias:

- Public workshops: Our live, virtual 2-hour Understanding and Mitigating Implicit Bias in Healthcare Workshop is offered to the public twice a year.
- Private workshops: Bring workshop to your organization at a time and place that works for you.
- Recorded workshops: Our Implicit Bias Workshop is available on-demand

Explore Implicit Bias resources at www.mnmed.org/IB

Racism in Medicine: Truths from MN Physicians (CME Available)

In this powerful video series, physicians of color share their stories of practicing medicine in Minnesota. Efforts toward making medicine more inclusive require an understanding of the experiences of these physicians. This project is a step toward addressing the harmful effects of racism, microaggressions, and implicit bias within the culture of medicine. Also available is a 90-minute workshop featuring critical reflcetion on, and discussion, the video series.

View the videos and symposium at www.mnmed.org/racismtruths

Conversations on Race and Equity (CME Available)

The Conversations on Race and Equity (CORE) series is a virtual space for physicians to discuss topics that relate to health equity and inclusion in healthcare.

Each session is 1 hour and includes facilitated dialogue based on curated content. The topics include:

Session 1: Anti-racism
Session 2: Cultural Humility
Session 3: Implicit Bias & Microaggressions
Session 4: Racism in Medicine
Session 5: Allyship

There are two ways to bring CORE to your organization:

- MMA Facilitated: With this option, each session will take place via Zoom with an experienced CORE facilitator
- Self-Guided: The MMA has developed a CORE Toolkit for healthcare organizations to host a CORE series on their own.

To bring CORE to your organization, visit www.mnmed.org/CORE

FOR MORE INFORMATION ABOUT ANY OF **THESE RESOURCES**

CONTACT

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VISIT

www.mnmed.org/healthequity

Minnesota Medical Association

Meeting the threat of new infectious diseases

The director of the new University of Minnesota Institute on Infectious Diseases discusses new disease threats in a hostile political environment.

After work at the University of Washington isolating the earliest versions of the SARS-CoV-2 virus to reach U.S. shores, Michael Gale, PhD, came to the University of Minnesota to lead the Department of Microbiology and Immunology and direct the new University Institute on Infectious Diseases—just in time to face widespread federal cutbacks in education and science, and open hostility to the vaccines long used to combat infectious diseases.

Gale tells *Minnesota Medicine* about the Institute, the current mood in Washington, possible sources of the next pandemic, and a program to increase disease surveillance. The interview has been edited for clarity and brevity.

Michael Gale, PhD
Head, Department of Microbiology and Immunology and Director, University Institute on Infectious Diseases
University of Minnesota

Let's talk about the Institute on Infectious Diseases. Provide a little context by describing the Institute. When was it formed? Why?

So the University of Minnesota Institute on Infectious Diseases—UMIID—was conceived probably halfway through the SARS-CoV-2 pandemic, and it really materialized as a solid concept fully about three years ago. And then to fast-forward, I came into the equation approximately two years ago, and then I eventually joined here October 31, 2024.

I was recruited here from the University of Washington School of Medicine in Seattle. I was a professor there. During the time the pandemic was happening, I did actually see a press release in the local newspaper in Seattle that the University of Minnesota was going to invest some big money to start an infectious disease institute, but then it kind of left my mind, because, you know, we were focused on combating the pandemic. Then approximately two-and-a-half years ago, the University of Minnesota reached out to me to ask if I'd be interested in this. They realized during the pandemic that they have a lot of talent, but they were running kind of haphazardly. They didn't have a fully organized system for outbreak response and handling a response to an emerging infectious disease, especially at a pandemic level. So the leaders at the University of Minnesota and the University of Minnesota School of Medicine got together and mapped out what they thought they needed to have in place to deal with the next pandemic. And they realized they needed a leader to facilitate what would become UMIID. I'm the lucky one who got selected.

What were you doing out in Washington during the pandemic? You played a pretty key role, had you not?

When the virus first came to the Western Hemisphere, the index patient was in a hospital near Seattle. The physician taking care of that patient was able to provide a specimen from that patient to us at the University of Washington. We isolated the virus and, you know, started working on

it. So that was the first virus outside of China, and it was eventually named SARS-CoV-2 WA1. That was a virus that started the Western Hemisphere pandemic. So we isolated that, and at the same time, I was part of a vaccine consortium that was mandated to launch the Moderna vaccine and get FDA approval. We isolated the new variants of the virus as they showed up in Seattle. So we had the resource in terms of all the viral variants to provide to researchers across the world to start working on vaccines and therapeutics, to take on the clinical problem of COVID. It was our work, also partnering with Gilead Sciences, that helped get remdesivir approved. When I talk about it, it sounds like a lot of stuff. We were just busy, just trying to get things done.

I'm going to want to talk to you later about the Moderna vaccine and mRNA vaccines in general. But let me get some other stuff out of the way first. So the University of Minnesota realized that they had expertise, but they lacked somewhat in organization. And so they went forward with this idea of the Institute on Infectious Diseases. What would be your elevator speech for the Institute?

So the business of the Institute is to identify, respond to, and mitigate infectious disease—any infectious disease, including contemporary infectious disease but certainly emerging infectious disease, such as the SARS-CoV-2 pandemic or any other outbreak that's going to come along. We want to have Minnesota positioned for an outbreak response, which would include interactions with the infrastructure that's already here—Minnesota Department of Health, the School of Medicine, health partners throughout the state, clinicians, and basic and translational researchers.

How does it differ in its mission from the University Center for Infectious Disease Research and Policy?

CIDRAP with Mike Osterholm is a very important player, a partner with UMIID.

> The University of Minnesota School of Medicine got together and mapped out what they thought they needed to have in place to deal with the next pandemic. And they realized they needed a leader to facilitate what would become the University of Minnesota Institute on Infectious Diseases. I'm the lucky one who got selected.

CIDRAP is about policy, and we're about response and developing countermeasures that would be used in the clinic. CIDRAP has a lot of fingers out there. They know what's going on in the world, and their network informs us of stuff that we need to know about infectious disease behavior worldwide. So this is a terrific partnership with CIDRAP.

What is the personnel-membership of the Institute on Infectious Diseases?

The Institute has membership of University of Minnesota faculty from across the entire University that now is over 80 faculty and getting new people who want to join almost daily. It does present a bit of a challenge, because members need to have something to bring to UMIID in terms of our mission for infectious disease response and mitigation. What's unique here is the expertise ranging from diagnostics to medical devices to clinicians on their feet in the clinic taking care of infectious disease patients, to people doing research to make vaccines and therapeutics. And we bring them all together.

I understand from an article I read in the *Star Tribune* a couple of months ago that one of the missions you proposed for the Institute is a program of disease surveillance. Describe what you have in mind.

This will be kind of a package, if you will, with infectious disease surveillance that's already taking place in the state of Minnesota. So the Minnesota Department of Health indeed has a surveillance network, and part of our effort is to partner with them to receive specimens from humans and nonhuman animals to push into a new pipeline for molecular surveillance to identify new threats that are emerging or are out there that we don't know about yet. And so there are several activities going on. I can talk first about UMIID faculty in the University of Minnesota School of Veterinary Medicine who have built surveillance and diagnostic platforms to monitor agricultural health and infectious disease, for example, to monitor the spread of bird flu in Minnesota farms and livestock. Then in the Department of Microbiology and Immunology, in the School of Medicine, we just recently acquired instrumentation that features the very latest molecular sequencing technology and equipment platform. We're excited about that because it gives us a great capacity at a low cost to do molecular surveillance for new viruses, bacteria, fungi—anything out there that can cause infectious disease in humans, that might be circulating in mosquitoes, in domestic animals, or even wild animals that we can get specimens for. One of the missions is to set up this molecular pipeline and start surveying Minnesota mosquitoes for more than just West Nile virus, which we all know is circulating across the state. The concern is that there are a lot of other viruses spread by mosquitoes that are not being tracked here that could mount a big problem if they actually showed up here and got a foothold.

What we currently have in Minnesota is the type of virus family called flavivirus, which includes West Nile virus, yellow fever virus, dengue virus, Zika virus. They're all cousins in this family. What

we're experiencing here now is West Nile virus infection. A couple of deaths were reported recently. That's a real risk. Minnesota right now doesn't have the right climate to support those types of mosquitoes with those other viruses, but ongoing climate change could create new habitat for new species of mosquitoes to move in. This is a real concern, because it's exactly what has happened in Florida and Southern California and southern Texas, where now viruses like chikungunya could be circulating in mosquitoes. Dengue virus may be circulating in those areas. We're not completely sure, but that's why this molecular surveillance is so important.

The world is experiencing a chikungunya virus emergence. We monitored an outbreak in southern Brazil where the virus changed enough that it caused the death of young, healthy 18-year-olds. That's very different. What we worry about, number one, is the virus showing up, and number two, is undergoing changes to make it more transmissible and more deadly.

And these are the sorts of changes that you might be able to identify and track and understand more completely with the sophisticated molecular analysis you're talking about, right?

Exactly, yes.

Are you doing any wastewater surveillance? I believe the University has taken over that program from the Department of Health.

We're working to expand that to include a range of viruses that we know show up in human stool. We can track all kinds of stuff that way. We're just setting up the molecular markers for that.

Discuss the importance of this in light of federal budget cuts to agencies like the CDC and NIH that have severely affected disease surveillance at federal, state, and local levels throughout the country.

Yeah, they've severely affected not only surveillance, but response. The United States about eight years ago invested in a program called Centers for Research and Emerging Infectious Diseases—CREID. I was the codirector of one of the CREID centers, and we had just completed recompetition for the next five years of funding when the new U.S. administration took over. The notice we got was that the program's being canceled because it is unsafe for Americans and is a waste of taxpayers' dollars. In that program we isolated SARS-CoV-2. We discovered new variants—the Omicron variant, for example. We responded by developing new diagnostics and launching vaccines and therapeutics, and the word we get from the administration is that the program is a waste of taxpayers' money and it is unsafe. That was unfortunate. The United States had nine CREID centers, I believe, and each one of them had a unique international network. So what that gave the country was international surveillance across the entire globe and the ability to respond to an outbreak no matter where it was.

When I came on board, and we were fine-tuning the design of UMIID, we brought in the U.S. Army Medical Research Command so that we would indeed have an international presence. They are our official partners. And our CREID center, even though it's not funded anymore, is still functional and viable. And that gives UMIID international partners in Brazil, Taiwan, Pakistan, and other areas—and two sites in Africa. So UMIID has an international presence and international footprint. And because these other centers have been discontinued by the federal government, and the CDC is not in good shape right now, UMIID is needed more than ever. We are now in a position to fill a large gap in biodefense, not just locally for Minnesota but for the country.

How have those budget cuts affected your prospects for funding in the future? Where does your money come from now?

Yeah, the budget cuts have already impacted some of our funding. The CREID program cut—that was a huge, huge cut. An infectious disease functional genomics program also was cut, which was a big hit for us.

But other programs are still alive and well, and I haven't seen any signs they're to be cut in the near future. But you know, it's unpredictable. If I've learned anything, we have to roll with the changes. We're going to have to go where the new priorities are presented to us. That's all we can do.

In addition to budget cuts for surveillance and research, the federal administration has seemed to downplay or has outright rejected the importance of vaccinations. How will this affect your work?

I don't know exactly how to answer that yet because we haven't put together a real formal plan around the government's disrespect for vaccines, but we're very pro vaccine. We know how powerful they can be and how important they are, and we have new technology here at UMIID with capability to build what we think would be very powerful vaccines to protect against chronic and acute infectious diseases. So we would have to carefully parse out how much effort we want to put there. Where we're going to need funding from the government, I would worry that they wouldn't fund anything. We will have to leverage local, internal funds for that.

You had mentioned that you had worked with Moderna on early samples of the COVID virus, which, of course, involved mRNA vaccines—Moderna and Pfizer. And now all federal funding of research on mRNA vaccines, I believe, has been curtailed, has it not?

Yes, it has.

That's huge in a bad way.

It's huge in a bad way. The promise of mRNA vaccines is huge. It goes beyond COVID. You can leverage mRNA to build any vaccine in a short amount of time. The vaccines have been in tens of millions of

people at tens of million of doses, and in my opinion, they're safe. The data that's out there says RNA vaccines are safe. But the people who say they're not safe are getting the ear of the administration.

So it makes it difficult to get any funding to support vaccine research, really. And there's a movement of vaccine hesitancy and vaccine dismissal that's taking place. And we really worry that three to six years from now we're going to see the effects. We're going to see emergence of old viruses that we thought were under control, emergence of new viruses, and then new diseases linked with these old viruses in young, old, middle-aged populations that were never studied because the viruses were under control for so long. We're all concerned about that, and we at UMIID are actually going to prioritize being ready for vaccine breakthrough cases or reemergence of viruses that are controlled by vaccines today so we can isolate them and contain them.

Measles, for example?

Measles, mumps, rubella, all that stuff. Childhood vaccines took those away. But you know, childhood vaccines may go the way of the horse and buggy.

That would change the health landscape in this country, wouldn't it?

I know a family whose grandfather had polio as a child, and he suffered from crippling poliomyelitis his whole life. Lived to be a nice old age at like 90 something, but his grandkids are not going to vaccinate their kids. Isn't that crazy? I don't understand it.

We just had a very famous guy come here today and speak to us—Stanley Plotkin. He developed the rubella vaccine. He thinks that we need to show movies to school children of what it was like with polio and rubella and all that stuff, so they know what those diseases did and what vaccines did for them, and so maybe we could get to them before social media influencers get to them.

> We discovered new COVID variants—the Omicron variant, for example. We responded by developing new diagnostics and launching vaccines and therapeutics, and the word we get from the administration is that the program is a waste of taxpayers' money and it is unsafe. That was unfortunate.

I think you need to show those movies to their parents.

Yeah, absolutely!

We are always surprised about what pandemic appears in our midst. No one knew anything about SARS-CoV-2 until it appeared—or at least just a few people in that lab in Wuhan.

No one saw it coming. You're absolutely right.

But nonetheless, what pathogens or what kinds of pathogens are most worrisome when it comes to anticipating or fearing another pandemic?

The biggest one today still is influenza because of its ability to recombine into a totally new virus basically at any time when there are more than one virus type around. As you know, H5N1 bird flu is definitely here in this country, is definitely in Minnesota, in the agriculture animals, and it has infected farmworkers. We're lucky, because right now it has not acquired the ability to infect humans efficiently. It's just a matter of time.

Yeah, I worry about that every time I clean a pheasant with my bare hands after shooting it.

You wash real well with soap and water. That'll kill the virus. But let's say if that pheasant had H5N1 virus, and you have just a contemporary flu, like H1N1 that's circulating around. The pheasant virus could infect you and then recombine and make a totally new virus that no immune system has ever seen that would be a pandemic-potential virus.

So if we were looking for trouble to come our way, that would be a likely direction from which it would come.

For sure. And then there are multiple directions here, because the world is undergoing an emergence of chikungunya virus. It's not the killer that flu is, but it is debilitating. Zika virus is still circulating in South America, and it's a real problem that in North America we have almost forgotten about it. Dengue virus is huge. New strains of dengue virus are reshaping the landscape of dengue virus infection. With dengue, we're talking a half billion people. So those are big concerns. But here at home, it's the possibility of a flu recombination event.

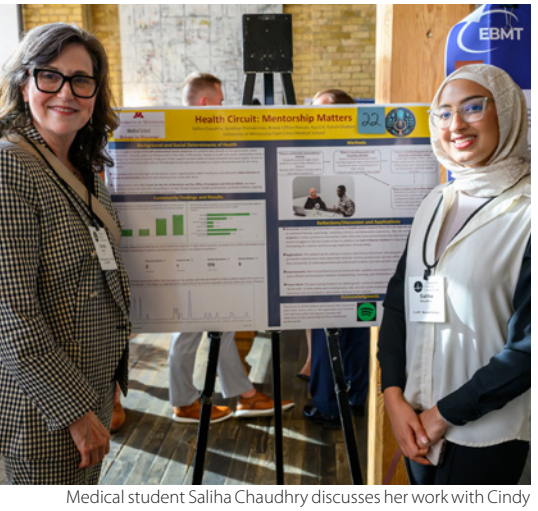
On that cheery note, is there any point you want to make that we haven't touched on yet.

I think what's exciting for those of us here is that the University has invested in UMIID. We have capacity to respond and do great things. In addition to all that, we have a mission to train young scientists and physicians in how to conduct outbreak response and mitigation. So we have all the tools, and we'll soon have expanded expertise here for the next generation. So if an outbreak happens, we'll be ready for it and we'll manage it. That's what drew me here. MM

Interview by Greg Breining, editor of *Minnesota Medicine*.

The more the merrier (left to right): Saam Dilmaghani, MD; Dionne Hart, MD; Kimberly Tjaden, MD, MPH; Edwin Bogonko, MD, MBA; Lauren Benning, DO; Andrea Hillerud, MD; and Dania Kamp, MD.

Resident Lauren Benning, DO, visits colleagues at the Empowering Physicians event.



Medical student Saliha Chaudhry discusses her work with Cindy Firkins Smith, MD.

EMPOWERING PHYSICIANS 2025

Physicians and physicians-in-training gather for a night of learning and connection

PHOTOGRAPHY BY RICH RYAN

This year's Empowering Physicians event offered a mix of camaraderie, education, and an examination of the American healthcare universe.

The event, held in late September at the Hewing Hotel in Minneapolis, attracted nearly 100 physicians and physicians-in-training.

The event kicked off with a president's reception that featured a poster session with research by medical students, residents and fellows, exhibitor displays, and networking.

After the reception, guests sat down for dinner, an address from incoming MMA President Lisa Mattson, MD, a discussion about the University of Minnesota by its president, Rebecca Cunningham, MD, and a keynote speech by Elisabeth Rosenthal, MD, author of the best-selling *An American Sickness*.

Rosenthal covered a variety of topics in her presentation, including the high cost of drugs, private equity, surprise billing, and accurate estimates for patients. "We should demand this in healthcare," she said. "People are avoiding interacting with the healthcare system because they are afraid they can't afford it."

Nearly 20 medical students displayed their research at the event, receiving invaluable feedback from practicing physicians.

The premier conference sponsor was Copic. Exhibitors included Abbott, Capitol Park Mental Health Hospital, Dexcom, Ecumen Home Care and Hospice, EOSIS, The FootLab, Kate Farms, the Minnesota Disability Determination Services, Minnesota Rare Disease Advisory Council, Otsuka, Palm Beach Accountable Care Organization, Pfizer, Phathom Pharmaceuticals, and Twin Cities Pain Clinic. MM

Keynote speaker and author Elisabeth Rosenthal, MD, discussed the many places where healthcare needs to be improved.

Long-time member Keith Stelter, MD, shows off his Distinguished Service Award plaque.

News Briefs

New MMA leadership put into place after August elections

Dania Kamp, MD, has been elected as the MMA's president-elect in this year's leadership election, which was held electronically in August.


Dania Kamp, MD

Megan Alise Lynch, MD, MS, won the contested election for resident/fellow trustee.

Three incumbents and three new members were elected to serve as trustees. The incumbents are Gaurav Mehta, MBBS; Rebecca Thomas, MD; and Kimberly Tjaden, MD, MPH. New trustees are Semirra Bayan, MD; Robert Cole Pueringer, MD; and Colin West, MD, PhD.

Two incumbent members of the Minnesota delegation to the AMA were also re-elected as delegates: Dennis O'Hare, MD, and David Thorson, MD. Two incumbent members of the Minnesota delegation to the AMA were also reelected as alternates: George Morris, MD, and Ashok Patel, MD.

Board member terms began October 1. AMA delegation terms begin January 1, 2026.

MMA honors physicians, physicians-in-training, advocates

Two physicians, four physicians-in-training, the late speaker emerita of the Minnesota House of Representatives, and the Center for Infectious Disease Research and Policy were all honored with MMA awards as part of this year's Empowering Physicians Conference.

2024

DISTINGUISHED SERVICE AWARD

Keith Stelter, MD, a family physician in Mankato and past MMA president, received the MMA's highest honor, the Distinguished Service Award, for his years of service to the association and to medicine.

Former MMA staffer Dave Renner, CAE, received the MMA's President's Award, which recognizes those who have given much of their free time to help improve the association.

Adrina Kocharian, Kathryn Xu, and Grant Welk received the Medical Student Leadership Award, which recognizes physicians-in-training who demonstrate exemplary leadership in service to medical students, the profession of medicine, and the broader community.

Saam Dilmaghani, MD, received the Resident and Fellow Leadership Award, which recognizes physicians-in-training who demonstrate exemplary leadership in service to residents and fellows, the profession of medicine, and the broader community.

David Tilstra, MD, received the Copic/MMA Foundation Humanitarian Award, which recognizes MMA members who make extraordinary effort to address the healthcare needs of underserved populations in Minnesota.

The late speaker emerita of the Minnesota House of Representatives, Melissa Hortman of Brooklyn Park, received the James H. Sova Memorial Award for Advocacy posthumously. Sova was the chief lobbyist for the MMA from 1968 until the time of his death in December 1981. This award is given to a person who has made a significant contribution to the advancement of public policy, medical sciences, medical education, medical care, or the socioeconomics of medical practice.

The Eric C. Dick Memorial Health Policy Partner Award is given to an individual, group of individuals, a project, or an organization that demonstrates their commitment to pursuing sound public policy, building coalitions, creating or strengthening partnerships with the goal of improving the health of Minnesotans or the practice of medicine in Minnesota. Dick was the MMA's manager of state legislative affairs from 2010 until his death in January 2021. This year's recipient is the Center for Infectious Disease Research and Policy (CIDRAP).

Members needed for Member Engagement Committee

Have a passion for connection, innovation, and impact? The MMA is creating a new committee that will improve membership value and enhance recruitment, retention, engagement, and satisfaction of members. We are currently recruiting members to serve on the committee, which will begin January 1, 2026.

Why you should apply:

- Build relationships with seasoned professionals.
- Help create a more connected, diverse, and energized physician community.
- Make your voice heard on issues that matter.

Committee details:

- Seven to nine members.
- One-year term (renewable up to three years).
- Chair appointed by the board chair.
- Open to members with fresh ideas and a drive to make a difference.

If you believe that medicine is stronger when we're engaged, informed, and united—this is your moment. Send us an email (mrubenstein@mnmed.org) if you're interested in helping to build a community that reflects the future of healthcare.

MMA dismayed by erosion of public health institutions

On several occasions this summer, the MMA has spoken out on the current administration's dismantling of public health institutions.

In late August, Centers for Disease Control and Prevention Director Susan Monarez, PhD, was asked to leave her position of only a few weeks. Her removal was followed by the resignations of other senior leaders at the CDC, who have accused Health and Human Services Secretary Robert F. Kennedy Jr. of undermining scientific recommendations for vaccines.

"These troublesome actions come at a time when public health is under attack and when credible science-based leadership from the CDC is needed more than ever," said Kimberly Tjaden, MD, MPH, MMA board chair. "In the past several months, we have seen budget cuts and staffing changes within the CDC—actions that have had a ripple effect nationwide and caused stress to Minnesota's public health infrastructure."

Tjaden noted, "The MMA joins the AMA in urging federal leaders to restore confidence in our public health institutions to ensure scientific expertise and data-driven guidance and policy."

Earlier in August, Kennedy announced plans to severely hamper vaccine development programs. It was reported that the Biomedical Advanced Research and Development Authority would terminate 22 mRNA vaccine-development contracts.

Michael Osterholm, PhD, MPH, director of the Center for Infectious Disease Research and Policy (CIDRAP) at the University of Minnesota, said the decision is one of the "worst decisions" he's seen, because "mRNA technology could save us in the next pandemic."

"The MMA continues to be disappointed and concerned with how the current administration is turning its back on science," said MMA Immediate Past President Edwin Bogonko, MD, MBA; "mRNA vaccines saved thousands of Minnesotans during the COVID-19 pandemic. We need more vaccine development, not less."

In June, the MMA released the following statement after Kennedy removed all members of the Advisory Committee on Immunizations Practices (ACIP): "The Minnesota Medical Association strongly denounces the June 9 decision by HHS Secretary Kennedy to remove all members of the Advisory Committee on Immunization Practices (ACIP). This decision is a direct attack on science and undermines the public's confidence in vaccine safety and medical expertise. With measles continuing to spread throughout the country, including in Minnesota, Americans need and deserve accurate and honest information from our nation's leadership, not falsehoods and fear."

MMA-championed Clean Indoor Air Act turns 50

Fifty years ago, Minnesota became the first state to adopt legislation restricting smoking in indoor public places and workspaces. That legislation, the Minnesota Clean Indoor Air Act (MCIAA), which the MMA championed, protects workers and the public from the harmful effects of breathing secondhand smoke.

"Reducing secondhand smoke exposure has been one of our greatest public health achievements, and we are proud of the fact that Minnesota has led the way nationally," said Minnesota Commissioner of Health Brooke Cunningham, MD, PhD.

The MMA continued to advocate for clean air and helped pass in 2007 the Freedom to Breathe Act, which prohibits smoking in restaurants and bars. This act expanded the prohibition of smoking provided in the MCIAA.

By 2010, workplace exposure to secondhand smoke had declined substantially, falling from 12% of workers exposed in 2003, to just 5%, according to data from the Minnesota Adult Tobacco Survey.

In 2019, the MCIAA was expanded once again to include e-cigarette use (vaping) and cannabis use—a change due in part to the multitude of cities and counties across the state leading the way with stronger clean air protections for their communities.

Despite updates to the law and reductions in secondhand smoke exposure, many communities are still exposed. In 2023, one in six students were still exposed to secondhand smoke in homes and cars, according to the Minnesota Youth Tobacco Survey. For students living in multifamily housing, more than one in four were exposed to secondhand smoke. Nationally, secondhand smoke exposure is more than two times greater than average among adults over age 25 with less than a college degree, families with incomes below the federal poverty level, and Black adults.

MMA Code of Conduct ensures that all are welcome

To create a welcome and inclusive environment for all physicians, trainees, staff, and guests, the MMA established a Code of Conduct. Each year, we remind members of the policy and encourage you to review it and help us create a space of belonging for all. View it at: www.mnmed.org/application/files/3516/9203/5162/IPPM_Code_of_Conduct.pdf MM

FROM THE CEO

Reimagining MMA committees

In any organization, well-functioning committees get things done. They help advance an organization's strategic plan. For associations, committees are where mission and membership meet. At MMA, we rely on committees to tap into the expertise, experience, ideas, and creativity of our members.

From a good governance perspective, committee structures should be reviewed periodically for relevance and effectiveness. To that end, the MMA Governance Committee began a comprehensive review of MMA committees in late 2024 by analyzing each committee's purpose, composition, attendance, and outcomes. Feedback from committee chairs and staff was also obtained. The Governance Committee concluded that changes to the committee structure were needed and focused on four key goals: (1) preserve member involvement, (2) support advancement of MMA's strategic plan, (3) avoid duplication, and (4) use staff resources as effectively and efficiently as possible.

Successful committees require participation by members and support from staff; both of those are limited resources. To some, committees, like long-standing programs or events, may be viewed as so-called sacred cows, existing out of tradition rather than out of need. Finding solutions amid these challenges is not easy.

After nearly a year of deliberation and consideration, led by the Governance Committee, our Board of Trustees in September approved a new MMA committee structure—moving from nine to six committees. The changes will better meet the organization's needs and deploy available resources more efficiently—that of members and of staff.

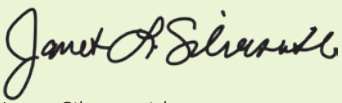
For 2026, the MMA's new committee structure will be as follows:

- Executive Committee.
- Finance and Audit Committee.
- Governance and Nominating Committee (merger of separate Governance Committee and Nominating and Leadership Development Committee).
- Advocacy and Policy Committee *(new)*.
- Member Engagement Committee *(new)*.
- Committee on Accreditation and Continuing Medical Education.

Organizational change can be hard and deserves careful deliberation and consideration. At the same time, organizations that do not change or adapt risk failure and irrelevance. In its 172-year history, the MMA has witnessed a lot of change and has experienced a lot of change. As we continue our work to make Minnesota the healthiest state and best place to practice, future change is inevitable. A constant, however, is the importance of your continued support and involvement to our ongoing success.

I hope you will consider volunteering for a committee—or task force—in the future.

Please feel free to contact me at any time with questions or concerns. MM



Janet Silversmith
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VIEWPOINT

Do what's needed to end gun violence

Lisa Mattson, MD
MMA President

This past summer has been a traumatic one for the citizens of Minnesota, starting in June with the brutal murders of Rep. Melissa Hortman and her husband, Mark, and the attempted murders of Sen. John Hoffman and his wife, Yvette, and most recently with the tragic shootings at Annunciation Catholic Church and School. It's safe to say that we all felt a little of our "Minnesota nice" tarnished.

Gun violence has become a major public health crisis. More children die by guns in Minnesota than any other medical condition we screen for at preventive visits. A 2022 study from the Harvard School of Public Health also found that homicide deaths among pregnant women are more prevalent than deaths from hypertension, hemorrhage, or sepsis, and 68% of those deaths involved guns.

As a way to address firearm safety, healthcare providers are encouraged to ask about the presence of guns in the home and proper storage of guns and ammunition, as well as asking about risk factors for intimate partner violence and suicide.

Gun violence must stop. This should not be a partisan issue. In early September, the MMA co-signed a letter with several other medical advocacy agencies asking Gov. Tim Walz for a special session to address gun violence. We specifically requested:

- A statewide ban on assault weapons.
- A statewide ban on high-capacity magazines.
- A statewide requirement that firearms be stored locked, unloaded, and separate from ammunition.
- The removal of the current prohibition on local municipalities enacting stricter firearm regulations than the state.

These requests are not meant to be an infringement on Second Amendment rights, as they still allow individuals to own guns. Rather, they are meant to bring evidence-based solutions to the gun violence epidemic.

Let's look at driving for a moment as a comparison. Before you are allowed to operate a motorized vehicle, you need to take a driver's education course, pass a written exam test, and pass a behind-the-wheel exam. You also need to get insurance to drive a car. Plus, there are consequences for driving without a license. Yet, provided someone is not prohibited from owning a gun by federal or state law, we allow just about any adult to own one.

In 2023, 46,728 individuals died from gun violence in the U.S. (including 17,927 homicides and 27,310 firearm suicides), according to information from the Johns Hopkins Bloomberg School of Public Health and the Center for Gun Violence Solutions. Data from 2024 shows that there were 503 mass shootings in the U.S. Looking at Minnesota data, in 2023, there were 525 gun deaths, with 379 of those being suicides. According to *The New England Journal of Medicine*, guns are the leading cause of death for children and teens ages 1–19 in the U.S. Furthermore, 4.6 million children lived with unlocked, loaded guns, and one out of three homes with kids have guns. As a society, we can and must do better.

Does anyone really need to own an assault weapon or a high-capacity magazine? Requiring guns to be stored safely could prevent many accidental deaths. It also seems reasonable to allow cities and municipalities the ability to have stricter policies if they feel that circumstances in their area demand greater oversight. These all seem like commonsense solutions that have the potential to save lives. Let's show our kids that America loves them more than it loves its guns. MM

Let's show our kids that America loves them more than it loves its guns.

ROLI DWIVEDI, MD, FAAFP, DABFM

Roli Dwivedi, MD, FAAFP, DABFM, is the chief executive officer and chief clinical officer of the Community-University Health Care Center in south Minneapolis, an associate professor and Mac Baird Vice Chair in Community Engagement and Advocacy for the Department of Family Medicine and Community Health at the University of Minnesota, and immediate past president of the Minnesota Academy of Family Physicians. She joined the MMA in 2024.

Where did you grow up, do your undergraduate and grad work, medical degree?

I left my childhood home in Lucknow, India, after high school to attend medical school near Mumbai. The time I spent doing an internship in rural India solidified my commitment to those in need. This passion drew me back to my hometown where I was entrusted with the opportunity to build and lead a charitable clinic for the underserved as its medical director.

In 2001, I immigrated to the United States to pursue my dream of practicing medicine in a world vastly different from the one I'd known. For an international medical graduate the journey was not easy, but I was fortunate to find incredible mentors and leaders who shaped my personal and professional growth. After completing my residency in family medicine at the University of Minnesota in 2009, I joined the Community-University Health Care Center, a Federally Qualified Health Center. It was the perfect match for me, aligning with my passion to serve underserved communities.

At CUHCC, I began as a faculty physician but soon advanced to the role of medical director. Since 2012, I have served as chief clinical officer. Our center serves a patient population where 80% are BIPOC, and the majority live below federal poverty guidelines. CUHCC is often the first point of care for immigrants and refugees navigating a complex healthcare system.

In 2022, I took on the role of Endowed Mac Baird Vice Chair for Community Engagement at the Department of Family Medicine and CEO at CUHCC. These roles have challenged me to grow as a leader and provided opportunities to manage budgets, compliance, production, quality, change management, and primary care transformation.

Tell us about your family.

My parents and siblings remain in India. My focus now is on the family I've built in the United States. With my husband, Ashutosh, working for U.S. Bank, our greatest joy is watching our son, Akshat, plan to pursue medicine, an echo of my own commitment.

Hobbies or side gigs?

I love reading, learning languages, cooking, and gardening.

Why did you decide to become a physician?

Growing up in India, I was profoundly inspired by the legacy of my great-grandfather, a healer who provided integrative Ayurvedic medicine to underserved communities. His unwavering commitment to health and well-being planted the earliest seeds of my passion for medicine. I vividly remember watching him greet every patient with compassion, listen intently to their concerns, and blend traditional knowledge with natural remedies. For many in our community, he was the only accessible source of care.

What was the greatest lesson of your medical education?

The realization that medicine demands three things simultaneously: lifelong learning to stay current in a constantly evolving field, a deep curiosity to properly diagnose and investigate, and above all, the humility to truly listen to the people I am serving.

What's the greatest surprise that your education left you unprepared for?

The greatest surprise was the sheer complexity of the healthcare system outside of the clinical setting. Specifically, I was surprised by the lack of dedicated preparation in two key areas:

- Navigating cultural and global health diversity. My training did not adequately prepare me to effectively serve diverse global populations, which requires deep cultural competence, understanding health beliefs across different ethnic backgrounds, and tailoring care to non-Western models.
- Addressing the "upstream" drivers of health. We were trained primarily in downstream care (treating existing disease) but lacked focus on understanding and addressing the upstream impacts—the social, economic, and political factors (social determinants of health) that are the root causes of poor health and healthcare inequities.

What's the greatest challenge facing medicine today?

There are several things that come to my mind like rising healthcare cost, financial sustainability, physician burnout, and access to care. Among these, financial sustainability is the biggest challenge.

How do you keep life balanced?

By having a routine in place like working hard from 7 a.m. to 7 p.m. but then shutting myself off from work for regular exercise, spending time with friends and family, watching TV shows, cooking, and volunteering.

If you weren't a physician—?

Definitely would have been a chef! I absolutely love cooking and experimenting with food. MM

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