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NEW OPTIONS IN MENTAL HEALTH TREATMENT

EmPATH units help keep patients in mental health emergency out of the hospital. PAGE 8



Collaborative care model can help us do better with those suffering from depression. PAGE 12



Changes in Minnesota's medical cannabis program. PAGE 18

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PHOTO BY RICH RYAN PHOTOGRAPHY

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Zeke J. McKinney, MD, MHI, MPH

I started to wonder about what happened with my patients after all the occasions when I've had to convey bad news. If it is this challenging for me, knowing well how treatable this disease is, having faith in the science and skill of other physicians and being at peace with the limits of medicine, how hard must this be for my patients?

Bearing bad news: walking with patients

I never knew how scary the word “cancer” is until I heard it in reference to my partner.

Our training as physicians focuses so much on the technical aspects of disease pathophysiology and interpreting data that it becomes second nature to think of significant disease in an abstract way. Despite a focus on patient-centered care rooted in compassion, we strive never to become too affected by the vulnerability of patients and families.

Cancer was the unlikely possibility following my wife’s surgery. It felt even more remote because of having delayed the procedure for a few years with pregnancy and then the pandemic.

Normally, interpreting data and understanding risk is my strong suit. But in this instance, it was impossible for me to see it that way. We seemed too young to be facing this kind of disease. She is generally healthy. This isn’t hereditary. This wasn’t simply a patient being diagnosed with a disease, this was my partner.

The gravity of highly improbable outcomes quickly bore down on me. What if she does not succeed in her treatment? What will happen to our young children? How could our family survive without our anchor? We’re approaching the point where we’ve been married for almost as long as we haven’t, and it’s hard to remember a world where she wasn’t here, nor imagine one where she won’t be.

I started to wonder about what happened with my patients after all the occasions when I’ve had to convey bad news. If it is this challenging for me, knowing well how treatable this disease is, having faith in the science and skill of other physicians and being at peace with the limits of medicine, how hard must this be for my patients?

All of this is independent of the fact that, for many patients, these stresses are compounded by the financial burdens of medical care in this country, including finding time away from work or sufficient childcare. Amid all this, we hope to convey intricate medical information to families, with an expectation that they can and will understand, and that they will be able to make informed decisions.

Although painful, this process showed me how easy it is for us as physicians to dissociate esoteric illnesses from the patients and families they impact. Our patients are all someone’s loved one. They are all struggling to process the implications of diseases they often can’t even see.

This reveals the most essential part of our job—far more important than understanding manifestations of diseases and their treatment: the connection with our patients as humans grasping to comprehend their own or a loved one’s fragility. It starts with acknowledging that the demonstrations of disease as relatively common occurrences for us are unique and powerful experiences for those we serve. Even when the diseases are nonfatal and treatable.

When you say one of those “scary words” to your patient, make sure there is enough space and time to walk them through what it really means. I don’t know that this happened enough for my wife as the patient, or me as her partner, and we can certainly do better.

No matter what, a patient’s life and the lives of their loved ones are going to change with this kind of news. We can only try to make the process easier. **MM**

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



COVID-19

Yesterday, today and tomorrow

Since the early months of 2020, we have experienced, learned and changed because of the COVID-19 virus and the disruptions, adaptations and losses it's caused.

The November/December issue of Minnesota Medicine will be devoted to sharing experiences, thoughts and predictions about the pandemic. Please share yours in any form you use to express yourself: essays, poems, photos, artwork ...



A few questions as prompts:

- How did you deal with the care of patients?
- Have you changed personally or professionally because of the pandemic? How?
- What do you think the future will hold?
- How did you maintain your emotional and mental health during the worst days?
- What frustrates you most today?
- What positive things came out of the pandemic?
- What have you missed most?
- What new things about yourself or others have you discovered?

If you just want to talk through some ideas, contact Linda Picone, editor of *Minnesota Medicine* at 612-669-0623 or lpicone@mnmed.org.

Send your thoughts, experiences and images to lpicone@mnmed.org by **September 30, 2021**.



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How to determine when treatment is futile

And who gets to decide



Terry Jones, MD, is an attending physician at a hospital in central Minnesota. Two weeks ago, an 86-year-old male patient was admitted to the hospital after contracting influenza at the nursing home where he has lived for the past three years. The patient's condition improved with significant intervention, but he remains on oxygen and continues to cough. His appetite has deteriorated and he has lost significant weight since being admitted. Jones expected to discharge the patient, but the nursing home refuses to take him back. To make matters worse, Jones did a routine chest x-ray on the patient that revealed a loculated abscess in the lower lobe of the patient's right lung. Medical staff have recommended that the abscess be surgically removed but the patient is a very high-risk surgery candidate. Without surgery, the patient likely will not improve. The patient's family has indicated that the medical staff should do whatever the patient wishes. Is this a case of medical futility? If so, how should futility be defined and communicated to the patient and his family?

Whether treatment is futile depends on the patient, the intervention and the timing

Generally, the term “medical futility” applies when, based on medical data and professional experience, a treating health-care provider determines that an intervention is no longer beneficial. Medical futility does not apply to treatments globally; it refers to a particular intervention at a particular time, for a specific patient.

Key in these situations are the ethical principles of autonomy, beneficence and non-maleficence; we must come from the framework of our patient and not our own, the decision must be in the best interest of the patient and there should be no harm. Although age should not be a specific factor, it can change the effectiveness of certain treatments and may affect the personal goals of a patient. What is considered futile for our patient in their 80s and nearer the end of their natural life may not be the same as for a patient in their 30s with much of their life still ahead.

The goal of medicine is to help the sick. Although the ethical requirement to respect patient autonomy entitles a patient to choose from among medically acceptable treatment options (or to reject all options), it does not entitle patients to receive whatever treatments they ask for. Physicians have no obligation to offer treatments that do not benefit patients; they should offer treatments that are consistent with professional standards of care that confer benefit to the patient. However, determining which interventions are beneficial to a patient can be difficult, and there is some subjectivity to any given situation, so a patient or surrogate

might see an intervention as beneficial while their physician does not.

Futility is best adjudicated by determining the clinical benefit—or lack of benefit—of an intervention and how it affects the goals of care. This rule should be uniformly applied whether a patient is young or old, poor or rich, learned or with limited education. Given this subjectivity, it is helpful to involve the expertise and experience of the medical team in reaching a determination.

Determining whether a medical treatment is futile basically comes down to deciding whether it passes the test of beneficence: that is, will this treatment be in the patient's “best interest”? The test of beneficence is complex because determining whether a medical treatment is beneficial or burdensome, proportionate or disproportionate, appropriate or inappropriate, involves value judgments by both the patient and the physician.

This brings us back to our case, which is that of a high-risk situation for a complex elderly patient who, one way or another, is approaching the end of their life. Informed consent with shared decision-making is one ethical process for approaching this situation. What facts can we discuss with this patient to help with their decision? Helpful information could include:

- What is the expected survival rate for an 86-year-old patient over the next one to five years?
- What is the survival rate for complex lung surgery for a patient in their late 80s with multiple comorbidities?
- Are there less risky options that could be discussed?
- What are the personal goals of our patient for his remaining years?

For a 30-year-old patient, a 2 percent chance of survival may seem worth going for. For our frail 86-year-old patient, a chance of less than 20 percent of leaving the hospital alive after surgery is not futile but it may not be as attractive as other options, such as being discharged to another location with home health or hospice care, in order to have as much quality time as possible with family and friends.

And that comes back to our definition of futile: “Is the situation and proposed treatment useless?”

I guess if the chance is “not zero,” it depends. MM

Dennis O’Hare, MD, is vice president of Medical Affairs, Bluestone Physician Services, Stillwater.

Communication is the key to making an ethical decision

Although the term “futility” appears to be straightforward, it is actually quite complex. As with most ethical challenges, there are many perspectives to be considered.

The “four-quadrant” approach to medical ethics analyzes a patient’s situation through questions about clinical considerations, patient preferences, quality of life and other factors. Clinical considerations (weighing beneficence and non-maleficence) and patient preferences (respecting autonomy) are generally straightforward.

Quality of life is the *patient’s* definition of quality, regardless of the ideas of the physician or institution providing care. Other factors can include a wide variety of considerations including equity and fairness, family issues, religious codes and cultural norms and more. By engaging deeply with the patient as a whole person, the treatment team will most likely be able to align the medical issues with the patient’s preferences and definition of quality.

Potential ethical dilemmas occur multiple times daily, but usually do not develop into quandaries because there is an alignment of variables in the four quadrants. Challenges arise when there is a lack of alignment. The key linking factor, which is substantially within the physician’s control, is communication.

As George Bernard Shaw said, “The single biggest problem in communication is the illusion that it has taken place.” At the Center for Advancing Serious Illness Communication, we believe that supporting a formalized approach to conducting and archiving conversations about serious illness and end-of-life considerations allows for earlier, more frequent and better discussions. The Center provides techniques, training and tools to support clinicians in the conduct of patient-centered and robust conversations that will empower the patients, families and future treatment teams—well ahead of any crisis. The principal benefit is allowing the reliable expression of the patient’s explicit values and the reliable delivery of goal-concordant care. When communication is planned with this in mind, medical futility decisions can often be preempted by keeping the four quadrants in alignment.

In this case, the medical intervention, drainage of the abscess, is technically feasible and may ease some of the patient’s symp-

toms, but with some procedural risk. Recovery may be arduous and not fully restorative. The key is that this competent patient retains his decision-making authority. MM

Timothy Sielaff, MD, PhD, FACS, is American College of Surgeons Ethics Fellow at MacLean Center for Clinical Medical Ethics, University of Chicago; former chief medical officer and senior vice president, Allina Health; and president of Allina Integrated Medical Network, Allina Health.

Center for Advancing Serious Illness Communication

The Center for Advancing Serious Illness Communication (CASIC) is a new joint initiative of the Minnesota Medical Association and the Minnesota Hospital Association. Its goal is to prepare clinicians and healthcare organizations to engage every patient experiencing a serious illness in meaningful discussion about their diagnosis, prognosis and care choices. Funded by Blue



The Center for Advancing Serious Illness Communication

A JOINT INITIATIVE OF THE MMA AND THE MHA

Cross Blue Shield of Minnesota, the Center began work early this year and is developing tools and resources to improve communication practices.

CASIC offers training for clinicians, and guidance for incorporating new communication skills into everyday practice. It CASIC also helps sites and systems develop best practices for serious illness communication, including patient identification,

documentation practices, internal resources needed, information on coding and reimbursement, development of workflows and dashboards and more as needed.

There are not enough palliative care specialists to meet the needs of patients, so it is critical that all clinicians have some level of familiarity and comfort with conducting these types of conversations. There are evidence-based tools and training that CASIC can help provide to help hone the skills needed to have a meaningful discussion.

The benefits of learning about serious illness communication include:

- Studies have shown that satisfaction improves for patients, their loved ones and their caregivers and clinicians when these conversations happen.
- Having a serious illness program at your site also impacts staff wellness.
- COVID-19 has highlighted the need for a different communication style, making both healthcare professionals and the general public more aware of its importance.

To learn more, please visit www.AdvancingSIC.org or contact Executive Director Karen Peterson at kpeterson@mnmed.org.

EMPATH

A new approach to mental health crisis

BY LINDA PICONE

The emergency department of a hospital is possibly the worst place for someone having a mental health crisis. Because everyone, by definition, is in crisis, whether it's a possible heart attack, a broken arm or a rash that's suddenly broken out. The ED is bright, loud and busy most of the time—just when someone with a mental health crisis needs a calmer, quieter atmosphere.

The first EMPATH Unit in Minnesota—and one of less than a dozen across the country—opened in April at M Health Fairview Southdale Hospital. The Emergency Psychiatric Assessment, Treatment and Healing Unit is an alternative to dealing with patients in mental health crisis in the ED and has already proven to reduce the number of patients who end up being admitted to the hospital.

“This is about as exciting as anything I've seen in my career,” says Lewis Zeidner, PhD, psychologist and M Health Fairview system director for clinical triage and transition services. “This is a better way to access mental health care; the ED is not set up for mental health crisis.”

The second EMPATH Unit in Minnesota opened in early August at CentraCare's St. Cloud Hospital. “I am very excited for the opportunities the EMPATH



PHOTO BY RICH RYAN PHOTOGRAPHY

Unit brings for helping patients in new and innovative ways, including quicker access to treatment and greater depth and intensity of programming with the potential for shorter stays, all in an environment focused on promoting dignity and respect,” says Larry Hook, MD, leader of the EMPATH team at the hospital. “The EMPATH environment recognizes and emphasizes that our community, neighbors and family members coming to the hospital with a mental health concern deserve, and should expect, the same dignity in care as when they present for a medical condition.”

How EMPATH is different

The EMPATH Unit is a short walk from Southdale's ED, so that patients can be triaged quickly and then, when it seems appropriate, moved to the EMPATH Unit, with a very different atmosphere.

EMPATH is designed to be soothing and relaxing, which means:

- Lots of windows and natural light.
- Fifteen comfortable recliners for people to rest or even sleep in.
- Four private sensory rooms where patients can be alone if they need some distance from others.
- Adjustable lighting in different colors, which patients can control themselves.
- No physical restraints.
- Music that patients can select themselves.

“The traditional ED can be agitating,” Zeidner says. “It's designed for trauma, it's loud, fast-paced and very controlled. When you're distressed emotionally, that's not comforting to you. In EMPATH, we have a more subdued tone. People can be in their streetclothes, they can get something to eat without touching a call button. They retain their agency and take care of their own basic human functions, allowing them to feel more like adults—which they are.”

In the ED, those in mental health crisis are seen by generalists—as is any patient who shows up at the ED. The EMPATH

PHOTOS COURTESY OF M HEALTH FAIRVIEW

Unit has mental health professionals round the clock, trained to work with people in mental health crisis.

One of the surprises for Zeidner has been that, so far, there has been less aggression than he might have feared. “We don’t have any restraints in EmPATH, but we really have had no significant aggression,” he says. “That’s not to say that no one gets agitated. Our colleagues at other EmPATH units told us that there wouldn’t be aggression, but we didn’t believe it until we saw it.”

The concept of the EmPATH Unit at St. Cloud hospital is similar. It’s an open space without the loud noises of the ED. CentraCare terms it “a living room-esque sort of waiting room setting.” It has recliners, showers, bathrooms, laundry and rooms for private conversations or to help relieve stress.

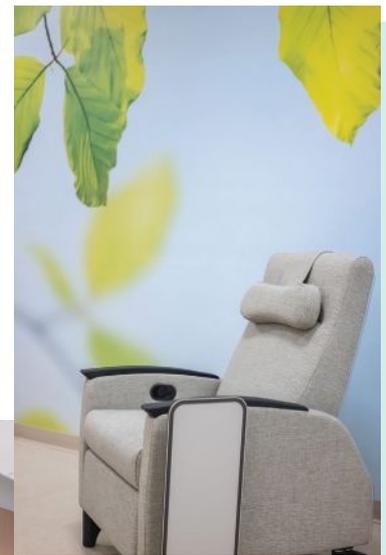
Reduced hospitalizations

In a hospital with a typical ED, about 60 percent of people who come in with a mental health crisis end up being admitted to the hospital. “No other specialty does that,” says Allison Holt, MD, physician chief for M Health Fairview Mental Health and Addiction.

Add some mental health resources—a psychologist or clinical social worker—to the ED and the percentage drops to about 40 percent, which was true for M Health Fairview Southdale Hospital before EmPATH opened. Now, Holt says, the percentage of patients who are admitted to the hospital after coming to the ED in mental health crisis is between 15 and 20 percent. “And that’s a huge difference.”

“Why is that?” Zeidner asks. “I like to draw the distinction between taking a camera picture of someone and shooting a movie. In the ED, it’s more like a picture, one point in time of a patient’s life. In EmPATH, we get to do more of a movie. They may come in very agitated, but over 24 to 48 hours, they may de-escalate and feel better. That’s really the advantage of an EmPATH Unit; we have the gift of time, of environment, of clinician.”

CentraCare’s St. Cloud Hospital sees about 10 patients a day come to the ED



LEFT: Allison Holt, MD, physician chief for M Health Fairview Mental Health and Addiction, and Lewis Zeidner, PhD, psychologist and M Health Fairview system director for clinical triage and transition services, see the EmPATH Unit at M Health Fairview Southdale Hospital as an important change for patients in crisis.

THIS PAGE: The EmPATH Unit at Southdale Hospital has recliners, private sensory rooms and lots of open space and natural light. Patients in the unit can control the color of the ceiling lights, the music and their food. There are no physical restraints in the unit.

for mental health services, or nearly 4,000 patients a year. Mental health emergencies are the sixth most common reason for coming to the ED. EmPATH is “a space for patients who do not need long-term mental health care, but that more brief stabilization period,” says Hook,

Holt says the crisis that brings someone to the ED is just the tip of the iceberg—and emergency department physicians don’t have time to look deeper. “EmPATH is a place where we can stop, find out what the real problem is and then address that. We’re doing that in a way that we can have a psychiatric professional assess and start treatment, with therapists who can gently provide support to the patient. You just can’t do that in the ED.”

Zeidner says EmPATH is a place for everyone. “We’re seeing people who are fully functioning in their world, who are working, but they are stressed. No one wakes up in the morning saying, ‘I need to go to the emergency department.’”

Getting patients in mental health crisis out of the ED quickly is good not only for them, but for the emergency physicians and other patients waiting for treatment there. “The medical ED staff have embraced the EmPATH Unit,” Zeidner says. “They really value it.”

Hook says that initially, CentraCare will use patient, provider and staff feedback to measure the success of the EmPATH Unit as they continue to develop processes around treatment in that setting. “During this period, we will define those measurable goals that will provide the greatest information in terms of how to improve the patient experience, as well as patient outcomes,” he says. “These goals could potentially include such things as repeat presentations to the emergency room, repeat psychiatric hospitalizations, average length of stay in the emergency room, average length of stay in the EmPATH Unit, number of treatment contacts within the EmPATH space, etc.”

Returning to pre-crisis status

Zeidner says that the average time people in mental health crisis spend at M Health Fairview Southdale Hospital is about 24

hours, with 2-1/2 of those in the ED for medical evaluation, the rest of the time in the EmPATH Unit. “Time on the medical side will be even shorter when we get past the pandemic,” he says, “because 90 minutes of it is waiting for the results of a COVID test.” There are no hard rules for how long someone can stay in EmPATH before being discharged or admitted to the hospital, Zeidner says, but 48 hours seems to be a reasonable cap.

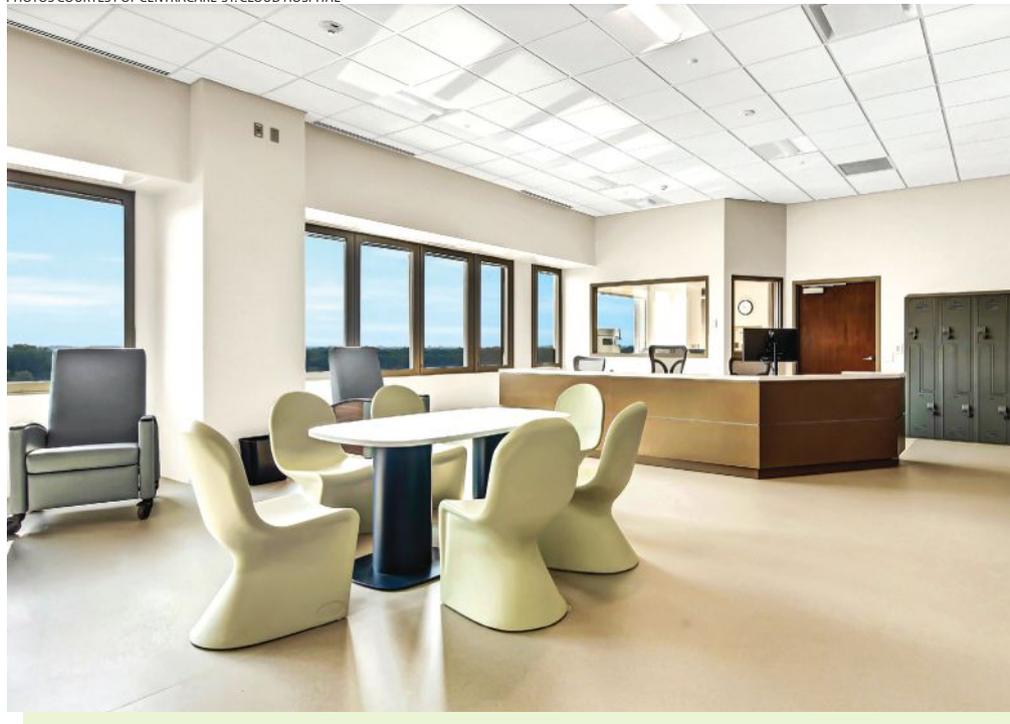
“The goal is to get people comfortable about moving back into their home life,” Holt says. “People are afraid, families are

Hospital, says the idea of the EmPATH Unit is to “pull a network of support people and resources to follow each patient back into the community.”

EmPATH for children and adolescents

Even before the unit at Southdale opened, M Health Fairview was planning a second EmPATH Unit at its Riverside Hospital—with one area for adults and a separate area for children and adolescents. “We’ve been talking to other organizations around the country to find out best practices,” Holt says. “There are no EmPATHs for kids that

PHOTOS COURTESY OF CENTRACARE-ST. CLOUD HOSPITAL



afraid. If we take some time to set up a truly effective discharge plan and transition to their next level of care, people feel more comfortable leaving the ED.”

Holt says community support—families, friends and social agencies—is important to the success of patients who come to EmPATH in crisis. “It’s another level of care that is effective and low-cost, and that actually fixes what ails them,” she says. “It might not be that they’re on the wrong medication, it might be that they have a dysfunctional relationship in the family or a housing situation that’s blown up. We don’t fix that medically.”

Kristin McNutt, physician assistant in Behavioral Care at CentraCare-St. Cloud



we know of, so there isn't a model that we can completely base our practice on. Even though EmPATH is EmPATH is EmPATH, these are not little adults; they have much different needs for space, for play, for family and support, for engagement in activities. We are researching that right now to make sure we have the best model for care."

Just as in the EmPATH Unit at Southdale, the unit at Riverside will have natural lighting, lots of open space, sensory rooms and time-out places, with mental health professionals staffing them. It will be next

to the ED, on the first level of the hospital. It will be much bigger than the unit at Southdale.

Holt says the development of the new EmPATH Unit is likely to happen in the first quarter of 2022, the opening sometime in the second quarter.

The need for EmPATH for children and adolescents is great, Holt says. M Health Fairview saw 20 children a day last spring in EDs. They set up an EmPATH-like situation in the

The EmPATH Unit at CentraCare-St. Cloud Hospital, opened in August, offers a peaceful setting, lots of natural light and recliners for patients in mental health crisis.

ED, she says, which was not ideal, but they were able to successfully discharge 20-25 percent of those children, rather than admitting them to the hospital—"we've been monitoring that and they're not bouncing back."

Addressing the current and future need

Hook says EmPATH is another step towards developing new models of care for patients. "With this new emergency psychiatric paradigm, we have transitioned away from mental health nurse assessments in the ER to psychiatric provider assessments throughout CentraCare," he says. "These providers also provide the care on the EmPATH unit, helping to create a more seamless transition from the emergency room into immediate care in the EmPATH space. With this new paradigm, we are also better able to provide care by a psychiatric provider to child and adolescent patients in the emergency room. The paradigm is new, having been 'in action' for one week, but has been met with positivity among mental health and emergency medicine teams, as well as patients.

"We will continue to look for opportunities to improve assessment and interventions for individuals presenting to our emergency rooms with mental health concerns as we grow into this new modality. We fully expect that our EmPATH unit and larger psychiatric efforts to support our community's emergency rooms will look different in six months, one year and two years from now. We are excited for the opportunities that exist around improved access for child and adolescent patients as well and continue our efforts to supporting these populations in even greater ways."

Holt says new ways of delivering care to psychiatric patients are needed. "We have about six to eight psychiatrists per 100,000 population in Minnesota. A severe shortage is 27 or less; adequate is 47. So, we are way off the mark—and we are not alone in this. It's true for much of the country."

Most people who have mental illness aren't necessarily seen by a psychiatric

provider, which Holt says can be fine because a primary care physician can do a lot with many patients. But the shortage of psychiatric professionals means that the healthcare system has to look at new models of care.

"This is really where we go next," Holt says. "We have to decrease the number of people going into the hospital in mental health crisis. There aren't enough psych beds and there aren't enough psychiatrists. How do we change the model so there's not just this desert of psychiatric need that isn't getting met?"

"We have to start getting upstream. So many people are worried about hospital beds, but if we keep putting our money into that, we are never going to get the interventions that we need."

EmPATH, she says, "feels like it truly is a step in the right direction." MM

Linda Picone is editor of *Minnesota Medicine*.

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DEPRESSION CARE

Opportunities to move the needle

BY ANGELINE CARLSON, RPH, PHD, AND
DEBRA KRAUSE, MBA

Depression care has been a focus in Minnesota for more than a decade. Past substantive efforts have included Minnesota Bridges to Excellence, a purchaser-led pay-for-performance program; the DIAMOND and COMPASS Projects, quality improvement efforts directed at clinic performance; and other purposeful efforts. However, despite good intentions and thoughtful collaboration, patient outcomes have failed to improve significantly and practices known to deliver improved outcomes such as Measurement-Based Care and the Collaborative Care Model have not been widely adopted by clinics and care systems in the state.

A 2019-2021 project funded by a Eugene B. Washington Community Engagement Award from the Patient-Centered Outcomes Research Institute (PCORI) used a mixed-methods approach (semi-structured interviews, surveys, and stakeholder and community convenings) to understand opportunities for “Improving Together: Advancing Mental Health Outcomes in Minnesota.”

What the data tell us

In Minnesota, we are fortunate to have publicly reported data regarding patient care and outcomes available from MN Community Measurement (MNCM). The Depression Care Measures Suite includes Adult Depression: PHQ-9/PHQ-9M Utilization; Follow-up, Response, and Remission at Six Months; and Follow-up, Re-

If outcomes improve 1 percent per year, that is improvement. But at that rate, it would take decades to get mental health outcomes to a level on par with physical health conditions. Incremental change is insufficient.

Transformation with a sense of urgency is needed.

sponse, and Remission at Twelve Months. A comparable suite of measures is available for adolescent depression but was not part of this project.

From the 2020 data reporting for 2019 dates of service, we know that while use of screening tools is high (77.6 percent for adults who have depression), performance rates drop for follow-up (48.5 percent),

six-month response (19.4 percent), and six-month remission (11.3 percent). In addition, there is wide variation in performance. The top-performing clinic has a six-month remission rate of 41.2 percent and a dozen clinics have a 0-percent six-month remission rate. There is also geographic variation by county. MNCM calculates the expected rate of performance, which adjusts for patient demographics. There are high-performing clinics that achieve two to three times the expected rate, while average and low-performing clinics fall well short of expected outcomes. While patient outcomes for all Minnesotans are unacceptable, outcomes for patients of color and ethnic and culturally diverse communities are even lower (remission rates less than half the rate for White patients), and in the case of depression remission at six months, the needle has been “stuck.” We wanted to better understand “why?” and learn how we could make progress together.

Key findings

We talked with clinicians and administrators at randomly selected clinics in both urban and rural communities. The clinics were system and non-system affiliated, of different sizes and with a wide range of performance rates. We supplemented the individual clinic interviews with in-

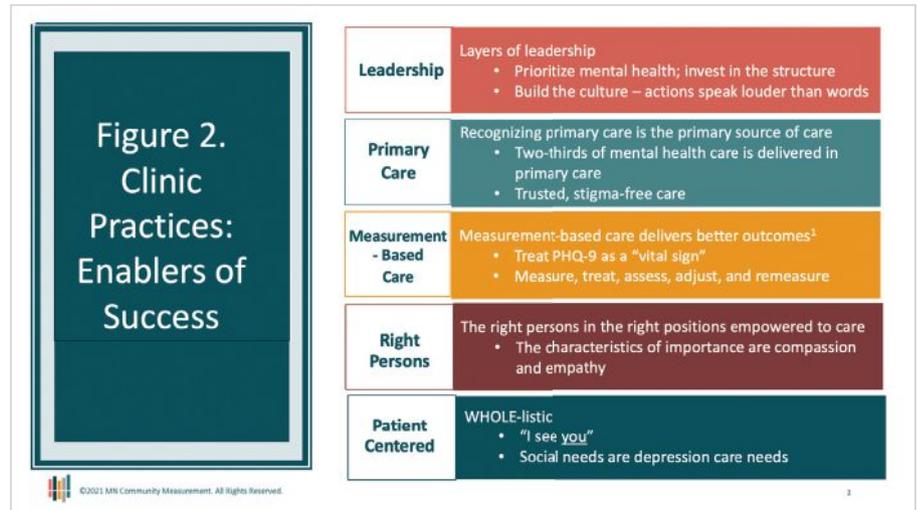
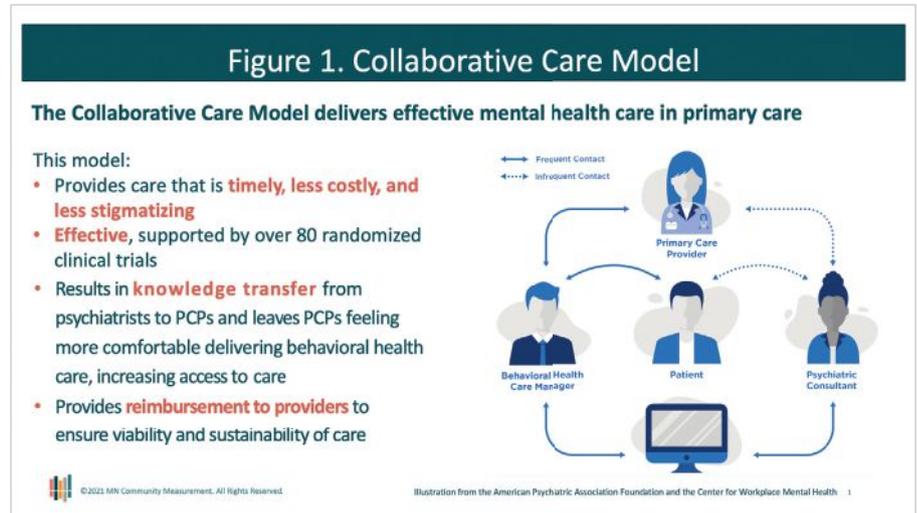
terviews at a system-wide level to better understand the role system policies and support played in the care processes at individual clinics. We also conducted an online quantitative survey of clinics to validate our findings. There were six overall themes that emerged regarding strategies for improving depression care. Some are new; others are not.

The PHQ-9 is only the beginning in caring for patients. Screening rates for depression are high, but clinic-reported performance rates decline at each successive Minnesota Community Measure—follow-up, response and finally remission. Even low performers on response and remission have high screening rates. Clinics with higher remission performance use the PHQ-9 as a vital sign, every bit as important as taking blood pressure readings for hypertension patients and HbA1c measures for persons with diabetes.

Resource proximity does not equal high performance. Clinics that have internal resources—care coordinators, social workers and consultant connections—are not always high performers. Clinics in areas lacking a large number of proximally located mental health resources are not always low performers. Identifying and then innovatively using the resources available in the clinic’s geographic area is key. Referrals to distant resources may not be comfortable for patients.

Health information technology is necessary but not sufficient. This is an old truth. A computer in every examination room isn’t enough—it has never been enough. Higher-performing clinics have integrated evidence-based care alerts into the EMR for depression just as alerts have been integrated for diabetes and cardiovascular care. Clinicians also ask more questions and find creative ways to help; clinic staff make warm handoffs, not just EMR notes, and compassionately help the patient take the first step, or the next step, in getting where they want to be, feeling better. As one high-performing clinician told us, “The patient knows that we’re on their side. There isn’t anything we’re not going to do to help them.”

Incentives and recognition of staff efforts play an important role. The incentives to increase performance do not need to be monetary. Nurses and care coordinators at higher-performing clinics appreciate being recognized for their contributions in aid of patient care. They are pleased and proud to know that they are an integral part of the team, with opportunities to air concerns about patients and



to offer suggestions that are valued. The importance of recognition can be summed up in three words: staff need to feel connected, appreciated and supported.

There are disconnects and gaps in care. This is another old truth in the healthcare system and it remains true, despite years of admiring the problem and attempts to deploy technology to facilitate record-sharing and information exchange. The disconnects and gaps are especially troublesome for mental health care. Connections between inpatient hospital care and return to primary care are significantly hampered. Connections between the community resources providing services to patients that can complement and enhance clinic care are even more difficult. Health plans and employers offer resources as

well, but these resources generally are not well known or utilized.

The Collaborative Care Model has not been widely adopted, despite efforts to increase awareness at the state level and nationally about the evidence supporting this model and the opportunity to receive reimbursement for services delivered under this model. This model provides care that is timely, less costly, and less stigmatizing and is supported by over 80 randomized clinical trials published in clinical journals. (Figure 1)

Collectively, these key findings offer insight regarding the unacceptably low performance levels and the lack of meaningful progress in improving outcomes. Even so, there are bright spots—clinics across the state that are delivering wonderful care and achieving remarkable levels of perfor-

mance. These clinics serve as evidence of what is possible. Keys to success are shown in Figure 2.

Challenges

We couldn't help but develop a deeper appreciation of the challenges that clinics face and need to overcome. Conversations with both high- and low-performing clinics identified four key challenges, each with multiple facets that were reinforced by responses to the quantitative survey conducted as part of this project.

The first three (prioritization, investments and talent) are connected and speak to resources. If we are to improve mental health care and outcomes, it must be prioritized. As one clinic told us, "We want brain health to be like heart health." Words alone will not make this a reality. It needs to be considered an investment, not a cost that can be trimmed when budgets are tight. We heard about positions and technology being eliminated, but "doing more with less" will not facilitate improved outcomes. Clinics are spread thin, care is time-consuming and the needs are great. Talent is essential—more people are needed in all roles and they are hard to find, especially the top talent. One of the outstanding clinicians at a high-performing clinic confided in us, "I am exhausted."

The final challenge is connecting the dots. Many hard-working and well-intentioned individuals and organizations want to help and are doing things large and small, but they are working in silos. We will only optimize the impact if we connect the dots within and between primary care and specialist resources and between healthcare providers and employer and community resources.

Looking forward

Based on interviews with clinics and health system administrators and the input from healthcare purchasers, stakeholders and communities, three key recommendations emerge for advancing mental health outcomes in Minnesota:

- Fully implement the Collaborative Care Model. This is proven, high-value care that will accelerate improved patient

For further information

This article focuses primarily on clinic practices. More information on project methods, community perspectives and collaborative opportunities to transform care were shared in MN Community Measurement's February 2021 Mental Health Summit and May 2021 Mental Health Awareness webinar. The recordings and slides from these events are available at <https://mncm.org/past-events-webinars/>.

outcomes. High-performing clinics will be able to do even better if they have the missing pieces of the model added. Average to low-performing clinics will get on the path to success. This model can be, and has been, successfully implemented in other states. Investment is needed in clinic staff and processes to accelerate adoption in Minnesota.

- Create community linkages to close gaps. The roles of each stakeholder group, as well as collaboration opportunities, were identified and documented in this project. If all stakeholders come together with their unique perspectives and capabilities, and if they work together, hold each other accountable and focus on outcomes, progress is possible.
- Drive improvement by investing in, reimbursing and rewarding clinics and clinicians providing exceptional evidence-based care. This must become the norm and not the exception.

Given the realities of our world today—the coronavirus pandemic and Delta variant, increasing prevalence of depression, recent MNCM performance data and health disparities—we are at a crisis point. If outcomes improve 1 percent per year, that is improvement. But at that rate, it would take decades to get mental health outcomes to a level on par with physical health conditions. Incremental change is insufficient. Transformation with a sense of urgency is needed. **MM**

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Inhale, Exhale 9:29

BY LAPRINCESS BREWER, MD, MPH

I want to inhale and exhale
 Not with permission but by God's grace; is that too out of place?
 I want to inhale and exhale
 Not that contaminated air or while on the ground in despair.
 I want to inhale and exhale
 Not compromised or by having to disguise.
 I want to inhale and exhale
 My dreams and aspirations beyond just conversations.
 Someday I'll breathe; if not me, maybe our posterity.

LaPrincess Brewer, MD, MPH, is a cardiologist and assistant professor of medicine, Division of Preventive Cardiology, Department of Cardiovascular Medicine, Mayo Clinic.

Author's note

The tragic deaths of George Floyd, Breonna Taylor and Ahmaud Arbery have forced our country to take its own empathy pulse. As a cardiologist, health equity researcher and community advocate, I have had a plethora of emotions, including exhaustion, devastation and angst.

I have had an even greater heaviness on my heart since the killing of George Floyd in Minneapolis. This was so close to home in a thriving area that I am very familiar with and one that my patients, community partners and friends live and work in.

To channel my own grief, this poem poured out of me as I turned off the news and cut off

social media. I pray that it may be a source of healing not only for myself and medical community colleagues but also for the patients and community I serve as well as for the families of those who have lost loved ones from senseless acts of racial violence and from COVID-19. I hope that it may give a voice to the voiceless and marginalized. I hope this poem can serve as a source of deep reflection for us all to use this moment as a turning point to come out better on the other side. The poem is purposefully brief and set at nine lines, each line representing a minute, approximately totaling the amount of time George Floyd suffered. MM

Sex and Charles Malchow, MD

Teaching about sex led to a prison term

BY RYAN T. HURT, MD, AND PAUL NELSON

In 1903, Charles Malchow, MD, professor of proctology at the Hamline University medical college, (and, at the time, a bachelor), published these words:

“Every medical man ... knows that there is nothing in this world so conducive to ecstasy, mental tranquility, personal amiability, and family unity as a properly performed sexual act; while at the same time there is nothing quite so provocative of irritability, discord, dissatisfaction and disgust, as improper, unwilling, and inharmonious sexual congress.”

This *Northwestern Lancet* article bore an unwieldy title, “Unrealized Sexual Sense and Development the Great Cause of Domestic Infelicity and Nervousness in Women.” Though we can see this only in retrospect, the article kicked off a project that Malchow had probably been working on for years: To advance the cause of human happiness (and especially women’s happiness) by teaching the truth about sex.

This article was probably a trial balloon: “Can I get away with this?” (This was, after all, 1903 in St. Paul—Victorian times in a provincial city.) He did get away with it, or seemed to: The article produced no negative reaction that can be found today. The bigger project was a book, a compilation of the then-current understanding of human heterosexual arousal, performance and satisfaction, written (though he denied this later) for a general audience.

With his partner and publisher Olly Burton, he produced, in 1904, the great work of his life and career—a book, *The Sexual Life*, 306 pages of matter-of-fact prose on a breathtaking range of intimate topics: male desire, female desire, youthful experimentation, contraception, abortion. Chapter titles included “Sexual Passion,” Hygienic Sexual Relations,” “Copulation and Propagation” and on and on. Whew!



FROM THE COLLECTION OF RYAN T. HURT, MD

Burton procured a list of 90,000 physicians, lawyers, bankers and pastors and prepared a 20-page advertising summary to be sent around the country. They had a business plan. Just to be sure, they inquired of the federal postal inspectors whether this might violate any law. They got an ambiguous response and charged ahead; 25,000 pamphlets went out in the mail.

Their trial, in federal court before Judge William Lochren, began in early October 1904. They had been indicted under what was known as the Comstock Act, a federal statute making a felony the transmission of obscenity through the mails. The Comstock Act, enacted in 1873, had been used extensively in the East, especially New York City, where Anthony Comstock himself (though not a lawyer), had run the show. His New York Society for the Prevention of Vice acted as an agent of the federal government in hounding and prosecuting purveyors of filth (including art schools and museums) wherever Comstock could find them. The Comstock Act had occasionally been used in Minnesota, too, but Burton and Malchow probably

did not know about those obscure cases, which mostly involved obscene letters and newspaper ads for abortifacients. A few fringe-dwelling men went to prison.

U.S. Attorney Charles Houpt planned a boring prosecution. He called only two witnesses, postal officials, who described the mailings and entered a copy of *The Sexual Life* into evidence. The material would, Houpt presumed, speak for itself. But he misjudged the judge. Lochren, a Civil War hero and—at least in public—a militant prude, demanded that Malchow’s obscenities be put affirmatively on the record. Houpt had to read the naughty bits aloud. He read 12 sections; three consisted of advice, sometimes explicit, on how to better perform intercourse. We can only imagine—it is worth imagining—raised eyebrows and suppressed chuckles among the 12 men of the jury as Houpt read such lines as “the friction occasioned by the undulations and the to-and-fro motion” and this verse borrowed from Shakespeare’s poem, “Venus and Adonis”:

*I’ll be a park, and thou shalt be my deer;
Feed where thou wilt, on mountain or in dale,
Graze on my lips; and if those hills be dry,
Stray lower, where the pleasant fountains lie.*

Burton and Malchow’s lawyer, V.F. Brown, tried to mount a defense that the book needed to be judged not by individual passages but by its overall purposes and likely effects. Judge Lochren shut this down. In a telling exchange, when Brown tried to get into evidence that sexual ignorance was “quite general,” Lochren cut him off with, “It is to be hoped that it is.”

The Comstock Act did not define obscenity (though it did explicitly forbid any mention of contraception), but Judge Lochren was up to the task. He instructed the jury that “obscene” meant “likely to raise in the young and immature, libidi-

nous thoughts,” thereby making children’s sensibilities the crucial legal measure. “The word ‘obscene,’” he continued, “[has] reference to sexual relations of persons, not other kinds of filth.” Under the circumstances, the jurors did not have much choice. They duly and quickly convicted Malchow and Burton and Judge Lochren sentenced them to two years in prison.

Readers may be shouting at the page, “What about the First Amendment?” The answer is simple: There was no such thing as a First Amendment defense to obscenity charges in 1906. We take for granted today that people can write and publish what they want, but that is a relatively recent development. The Comstock Act was challenged on First Amendment grounds in 1957, 50 years after *United States v. Burton and Malchow*; the case went to the Supreme Court and the challengers lost, by a vote of 7 to 2, yes, in the famously liberal Warren Court. The Supreme Court adopted the interpretation we know today only in 1973.

How had Charles Malchow maneuvered himself from the faculty office to the prison cell? The tale is an unlikely one. He’d grown up a working-class kid in Northeast Minneapolis, the son of German immigrants. He left school as a teenager after his father died; he had to help support his disabled mother. At age 27, he began medical studies at the Minneapolis College of Physicians and Surgeons, and in three years graduated first in his class.

He set up a medical practice in Shakopee, but small-town practice wasn’t for him. Twice in the next three years he left for advanced medical study in London, Vienna and Berlin. In Europe he encountered the works, then new and mind-blowing, of the Englishman Havelock Ellis. Ellis published the first of his (now unreadable) six-volume treatise, *Studies in the Psychology of Sex*, in 1897.

Ellis was interested mostly in sexual deviance from the norm. (That 1897 first volume, now known as Volume Two, was titled *Sexual Inversion*, that is, homosexuality.) Malchow was interested in something with a better chance at popu-

larity—conventional marital sex and its contribution to human happiness.

Once back in Minnesota, Malchow set up a practice in downtown Minneapolis, joined the faculty of Hamline University College of Physicians and Surgeons (his alma mater had merged with Hamline) and courted another native of northeast Minneapolis, Lydia Gluek of the Gluek Brewery family. They married in 1904, the same year the book came out. They were good-looking, they were prosperous and he, at least, was ambitious. His ambition brought them both down.

Malchow and Burton appealed their convictions, to no avail, although Judge Lochren reduced their sentence from two years to one. They reported to Stillwater Prison (there were no federal prisons in those days) in June 1906. Meanwhile, their allies and supporters appealed to President Theodore Roosevelt for a pardon. Roosevelt was a man of the world, familiar with the fleshpots of Gotham (he had been New York City police commissioner), had six children and, presumably, wished marital happiness for both his wives (his first died young). Was there a chance he might see the value of Malchow’s project, or have mercy? There was not.

President Roosevelt was no less a prude, at least in his public life, than Judge Lochren. He considered the great Russian novelist Leo Tolstoy “a sexual and moral pervert.” Although Roosevelt received pleas for mercy from Mayor William Henry Eustis of Minneapolis, Minnesota Governor John A. Johnson and Minnesota U.S. senators Moses Clapp and Knute Nelson, he did not budge. In a letter to Senator Nelson, he wrote, “It is a hideous and loathsome book. I would as soon see poison circulated in the household,” as a copy of *The Sexual Life*. There would be no clemency.

With credit for good time, Malchow (and Burton, too) served nine months in prison. Malchow and his publisher were felons, but the book sold and sold and sold, 100,000 copies in various editions, although Malchow apparently had nothing to do with any of them after the second. (The book can still be found easily on-

line.) Prosecution and prison time did not ruin Malchow, although they cost him his position at Hamline. He returned to the practice of medicine and the house near Lake of the Isles, but not for long. In 1913, he and Lydia moved to Santa Monica, California. Malchow never practiced medicine in California and died there in 1917 at age 53 from complications of diabetes. Lydia lived in California the rest of her life (she died in 1943) and never remarried. The Malchows had no children.

When Alfred Kinsey, ScD, published *Sexual Behavior in the Human Male* in 1948, he lamented on the first page that “human sexual behavior represents one of the least explored segments of biology, psychology, and sociology.” Malchow could have written that sentence 44 years earlier. In 1953, after publication of *Sexual Behavior in the Human Female* (which cited Malchow six times), Kinsey appeared on the cover of *Time* magazine, a reliable sign of mainstream acceptance. Kinsey, although he could only have guessed at this when he began, chose the right decade for his work; by the 1940s, American prudery had receded just enough.

Charles Malchow (maybe married women confided in him, we don’t know) had identified a problem, ignorance about sex, that brought people unnecessary episodes (or lifetimes) of frustration. With *The Sexual Life*, he aimed to add to the sum of marital pleasure and family happiness for millions. But he made a big mistake: he did it 50 years too early. Being ahead of one’s time is sometimes rewarded, sometimes punished. **MM**

Ryan T. Hurt, MD, is professor of medicine at Mayo Clinic. Paul Nelson is an amateur historian and author of a number of publications on Minnesota history.

This article was adapted for *Minnesota Medicine* with permission from the Ramsey County Historical Society. “A Doctor Ahead of His Time and the Trouble that Followed: The Sexual Life by Charles W. Malchow” by Ryan T. Hurt, MD, and Paul Nelson, was published in *Ramsey County History* 55, no. 3 (Fall 2020).

MEDICAL CANNABIS

Six years in, Minnesota's program is growing and changing

BY LINDA PICONE

Minnesota's medical cannabis program started just a little more than six years ago and has grown, as expected, in the number of qualifying medical conditions covered, the number of patients registered, the number of healthcare providers participating and the number of medical cannabis units sold and product sales made by the state's two authorized manufacturers.

It also has grown in terms of the knowledge base about medical cannabis.

"We continue to be one of the only states in the nation collecting patient experience data," says Chris Tholkes, MA, director of the Office of Medical Cannabis. "What we're learning from the data is that patients are seeing tremendous benefit from participating in the program. We hear story after story about not just a reduction in symptoms but being able to get off other medications."

The Office of Medical Cannabis has commissioned and performed several studies on use of medical cannabis for specific conditions—and will do more in the future. "There have been so many restrictions on cannabis research (because marijuana/cannabis is still a Schedule I illegal drug under federal law). I really have a great love for what we can contribute to research," says Tholkes.

Upcoming changes in Minnesota's medical cannabis program

Although the Minnesota Legislature did not legalize recreational marijuana in the 2021 session (the House passed a bill, but it was not taken up by the Senate), it did make several significant changes to the medical cannabis program.

The biggest change allows medical cannabis patients who are 21 or older to access medical cannabis flower—which means smokable cannabis. Currently, Minnesota is one of only a few states with medical cannabis access that prohibits use of flower products. Medical cannabis flower products will be allowed once policy is developed by the Minnesota Department of Health's Office of Medical Cannabis, no later than March 1, 2022.

With smokable products, Tholkes says, there likely will be a reduction in cost to the patient—and cost of the current products is a complaint of many in the program and likely keeps others who could benefit out of the program.

"Other states have seen a reduction in costs with smokable cannabis," Tholkes says. "The biggest cost now is that the manufacturers have to extract the oil, so smokable should in theory be less expensive."

The regulations for smokable cannabis will be designed to make sure that the

product is stable and consistent in dosage, as are the non-smokable products.

Recreational cannabis would be "a whole different ballgame," Tholkes says. "Most other states have seen a decline in the medical side when they go to recreational, but lots of folks, I think, would continue in the medical program. People really value that conversation with pharmacists and there is some comfort in knowing how it is processed."

Other 2021 legislative changes to the medical cannabis program:

- Allow curbside pickup of medical cannabis products.
- Allow a single designated caregiver to pick up medical cannabis products for up to six registered patients (it has been restricted to one).
- Make it possible for the Commissioner of MDH to remove a health condition from the list of those qualified for medical cannabis, after receiving a petition from the public or a task force. Until now, the Commissioner has only been able to add or modify conditions.
- Allow pharmacist-patient consultations by phone or other remote means, in addition to videoconference.
- Remove the requirement for a pharmacist-patient consultation when there is no change in dosage or product.
- Remove the requirement that a healthcare practitioner determine whether a

patient is disabled and needs caregiver assistance with medical cannabis because of that disability.

The curbside visit and telephone consultation came about through executive order during the pandemic shut-down, says Tholkes

Medical cannabis numbers

The Office of Medical Cannabis posts updated registration data on its site <https://www.health.state.mn.us/people/cannabis/about/medicalcannabisstats.html> on Fridays.

The cumulative statistics from the beginning of the program on June 1, 2015 through August 5, 2021 are:

- 1,946 healthcare practitioners registered and authorized to certify patients for medical cannabis.
- 50,482 patients who were approved for medical cannabis (since the program started).
- 23,772 patients currently active in the medical cannabis registry.

- 1,130 patient caregivers who have received background checks and are approved.

The price of medical cannabis

Prices of most medical cannabis products dropped by 20–24 percent from 2016 to 2019. For example: 120 ml Heather oral suspension, cherry vanilla flavor, sold by LeafLine, cost \$207 in October 2016 and \$158.28 in December 2019 (and today).

The average 30-day “spend” for a patient with one qualifying condition was \$355 in 2016 and \$311 in 2019. In 2019, the average ranged from \$189 for a person with terminal illness to \$364 for someone with seizures.

In 2019, 10,755 patients with intractable pain spent an average of \$314 every 30 days on medical cannabis products. The next largest group was 3,008 with PTSD, who spent an average of \$320. Some 1,223 patients with cancer spent an average of \$236.

The number of units sold by both medical cannabis manufacturers went from 17,691 in the fourth quarter of 2016 to

113,832 in the fourth quarter of 2019, with net sales of \$1.6 million in the last quarter of 2016 to \$7.2 million in the last quarter of 2019—an increase of \$5.6 million or 350 percent.

By the end of 2019, Minnesota’s authorized medical cannabis dispensary companies, LeafLine and Green Goods, had sold:

- 503,980 vape oil units at a total of \$37.8 million.
- 174,981 oral suspension units at a total of \$16.8 million.
- 177,978 capsule units at a total of \$8.2 million.
- 26,376 topical units at a total of \$1.2 million.

Report on Medical Cannabis Price Study May 2020 by BerryDunn of Portland, Maine, for Minnesota Department of Health, Office of Medical Cannabis

Medical cannabis and PTSD

Post-traumatic stress disorder (PTSD) was added to the list of qualifying conditions

(continued on next page)



MEDICAL CANNABIS

Six years in, Minnesota's program is growing and changing

(continued from previous page)

for medical cannabis effective August 1, 2017.

In the first year after PTSD was added, 15,538 products were purchased by those who were certified because they had a PTSD diagnosis as a qualifying condition.

Patients who responded to a survey about their use of medical cannabis ranked the benefit they felt they had received from 1 (no benefit) to 7 (great deal of benefit); 76 percent of responding patients rated benefit 6 or 7, 4 percent rated benefit 1, 2 or 3.

The most important benefits, patients said, were anxiety reduction (23 percent), improved sleep (16 percent), improved mood and/or emotional regulation (13 percent) and pain reduction (12 percent).

Comments from patients who responded included:

- *"Fewer periods of dissociation due to increased mindfulness, being able to tolerate processing trauma in therapy without dissociating, improved sleep, improved transition from sleeping to wakefulness, decreased body pain, eating more, not isolating from friends and family as much, being able to tend to my house more."*
- *"Sleeping has been AMAZING, pain is way down, not helping my anxiety as much as I would like, but nothing is perfect."*
- *"Controlled doses. I used cannabis before this program in such an uncontrolled dosage that it affected my other medications. The control of the cartridge has been extremely helpful."*
- *"Being able to go to work with less anxiety and feeling like I can function. No more night terrors and screaming in my sleep."*
- *"Feeling less anxious and having to deal with less chronic pain has overall improved my quality of life a great deal. I have more moments of happiness and it's opened up many doors to me that I have had shut for a long time."*

- *"Better sleep, better appetite, I'm not so angry all the time. My memories don't seem to bother me like they used to. This has been a life changer for me!"*
- *"Since starting medical cannabis it's like I've been given a fair chance to treat my PTSD symptoms I've struggled with over a decade now. My family sees a night and day difference and it's easier to communicate with them. I've since found a part-time job with flexible hours to work around starting college in January, 2018. The only hope I have is that it becomes more affordable as I'm barely able to afford it now."*

About 25 percent of the patients who responded reported physical or mental side effects related to medical cannabis use. The most common adverse side effects were dry mouth, increased appetite, anxiety, drowsiness and fatigue. No serious adverse events were reported during the observation period.

Post-Traumatic Stress Disorder Patients in the Minnesota Medical Cannabis Program: Experiences of Enrollees During the First Five Months July 2019, report of the Minnesota Department of Health, Office of Medical Cannabis

Medical cannabis and intractable pain

From August 1, 2016 through December 31, 2016, 2,290 patients were enrolled under the qualifying condition of intractable pain (45 of them were already enrolled for another condition).

According to the Patient Self-Evaluation (PSE) completed by patients prior to each medical cannabis purchase, from patient and healthcare practitioner surveys and from pain scale information at certification, about half of those certified for intractable pain saw a high degree of benefit from medical cannabis (61 percent of patients who responded and 43 percent of healthcare practitioners) or a score of 6 or 7 on a seven-point scale. About 10 percent of patients and 24 percent of healthcare

practitioners said medical cannabis was of little or no benefit (score of 1, 2 or 3).

The most-mentioned benefits included reduction in pain severity (64 percent) and improved sleep (27 percent). Patient comments included:

- *"This program has opened up a world for me I thought I lost. I started on this just a few short months ago and am totally off my narco's and nictin. I also have had less spasms and cramping throughout my body. I even chanced getting on a motorcycle and going for a short ride with a friend before it snowed. Thought never do that again. It has also helped me gain weight. And silence some demons in my head from my PTSD. So, thank you. Now all I ask is make it affordable to stay on."*
- *"At first, when I began using the medical cannabis for pain, I Definitely noticed a Drastic Relief in my pain levels - that was So Wonderful - I was So Hopeful. Then, unfortunately, after the first week of using the cannabis regularly, the efficacy for the pain relief I had been receiving began to steadily wane..., to the point of no noticeable pain relief at all within a 6 to 8 week period - even though I carefully "upped" the dosage and the frequency of dosing, etc... I'm so disheartened..., but I know others with the same type of pain that I have that are experiencing and sustaining far better pain relief."*
- *"Medical cannabis has not made a difference for me. I have never used it before and was a little hesitant to try. When I did I found that I had no relief of pain and I didn't like the way I felt so I discontinued use."*
- *"Reduction in migraine occurrence and severity, improved sleep, less overall muscle aching and cramping, pain relief from arthritic joints, reduction in GI reflux which also aids sleep."*
- *"I have fibromyalgia. I lived my life in constant pain my daily pain on an average was an 8. I started taking medical cannabis in August. I now have a daily pain average between 2 and 3. After 2 weeks of cannabis I cooked my first meal in 15 years. My husband was doing all of the cooking and housework I am now able to help with it."*

Nearly 60 percent said they were able to reduce their use of other pain medications while on medical cannabis.

The most common adverse side effects were dry mouth, drowsiness, fatigue and

mental clouding/“foggy brain.” About 35-40 percent reported experiencing at least one mental or physical adverse effect, with about 90 percent saying the adverse effect was mild to moderate in severity. No

serious adverse events were reported during the observation period. **MM**

Intractable Pain Patients in the Minnesota Medical Cannabis Program: Experience of Enrollees During the First Five Months, report of the Minnesota Department of Health, Office of Medical Cannabis

Medical cannabis for **ANXIETY DISORDER?**

Physician working group takes a closer look

BY ANDY STEINER

Nearly every year since medical cannabis was legalized in Minnesota, the Minnesota Department of Health’s Office of Medical Cannabis has received petitions requesting that anxiety disorder be included in the list of conditions eligible to be certified for medical cannabis treatment. Every year the petitions have been rejected.

This year, in what may be a small step toward certification, a working group of physicians and other mental health and addiction professionals were recruited by the office to discuss medical cannabis and its efficacy in the treatment of anxiety disorders. (MDH is accepting public written comments on medical cannabis and anxiety disorders through October 1. Send comments to health.cannabis.addmedicalcondition@state.mn.us.)

Chris Tholkes, MA, director of the Office of Medical Cannabis, explained that the group of seven, which included five physicians in a range of specialties, met this spring in three two-hour-long virtual sessions.

While her department is well aware of the level of public interest in adding anxiety to the list of qualifying conditions, Tholkes says she and her colleagues are

also aware of valid concern that’s been expressed by members of the state’s medical community.

“There’s obviously tremendous interest in adding this condition,” Tholkes says. “It didn’t feel fair to ask people to just keep submitting petitions every year. We felt like we weren’t elevating the discussion with the passive approach we were taking. We weren’t hearing from the medical community.”

The relative silence from physicians needed to be addressed, Tholkes says: The petitions of support felt troublingly uneven, with laypeople clearly on the side of certification and physicians uncharacteristically reluctant to weigh in on the issue.

“We got hundreds of letters from individuals,” Tholkes says. “We got one letter from a psychiatrist who raised some very valid concerns about the use of cannabis in treating anxiety.” Minnesota’s medical cannabis system requires a physician, physician assistant or advanced practice registered nurse to certify a patient for treatment, she explains, and because of this fact, staff wanted to fully address this concern and further test the waters with members of the medical community before diving in.

The work group was her office’s attempt at getting a better sense of where physicians stood on the issue, Tholkes says: “Support was there from patients or regular people in our program or people who want to be patients in our program.” After much review and consideration, she adds, “Where we landed was, ‘It feels like we have to go back out and try to do a deeper engagement with the medical community.’”

Recruiting a diverse group of physicians to take a deeper look at the issues felt like an important step. Because a warning flag had been raised about the safety of cannabis in treating anxiety, Tholkes and her colleagues believed it was important to measure physicians’ collective pulse: Minnesota’s medical cannabis program can’t work without physician support.

“We think it is important to engage the medical community on these issues,” she says. “We want the guard rails up. We want medical input on these decisions.”

A diversity of opinion

To assemble members of the working group, Tholkes and her staff set out to find a group of physicians who represented a range of backgrounds, opinions and experience treating patients with anxiety—as well as physicians who’ve worked with patients who self-medicate for anxiety with cannabis.

To assemble a list of possible working group members, Tholkes and her staff started with a blank slate. “We did a ton of outreach,” she says. “We brainstormed. We did internet research on who is working in this space. We reached out to the

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Medical cannabis for ANXIETY DISORDER?

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psychiatrist who submitted that letter of opposition. We wanted to have a robust discussion of risks and benefits.”

It isn't always easy to find physicians or other members of the medical community to support her office's efforts, Tholkes says. This lack of support was more pronounced at the beginning: “There was a tremendous amount of hesitance in 2015 when the program was launched. Healthcare practitioners did not want to be associated with it or have a public opinion on the program. It has gotten better the longer we've been around, but it is still challenging to gather physician support for our work.”

The final working group, Tholkes says, included general practice physicians, a psychiatrist and researcher, a marriage and family therapist, and a physician who has certified many patients for medical cannabis treatment.

While she feels good about the group's background and diversity of participants,

Tholkes also wants to be open about its limitations. “I want to be honest that the workgroup was seven people,” she says. “Does it represent the whole medical community? I'm not sure. I do think it was a good mix. We worked hard to get a variety of opinions. But I suspect we could be criticized for having a group only of seven.”

A primary care physician who is board-certified in addiction medicine, Cuong Pham, MD, works at Community University Health Care Center (CUHCC) and is an assistant professor of medicine at the University of Minnesota Medical School. When he was asked by Tholkes' office to join the working group, Pham made it clear that while he was happy to help out, his background on the topic was limited.

“I'm not an expert in medical cannabis,” he says. “Most my patients don't use medical cannabis. It is too expensive for them.”

The first group meeting was, Pham recalls, “really interesting.” The meeting's struc-

ture was open-ended, and the group of physicians launched in with a range of opinions on medical cannabis and the appropriateness of it being used to treat anxiety.

“Physicians are pretty confident people,” Pham says. “Folks were talking and talking. It was a lot of voices, a lot of opinions.”

While he was surprised by the amount of opposition expressed by the psychiatrists in the group, (“The thought process for them is their clinical experiences,” he says “They've seen the dramatic negative effects that cannabis use can have on psychosis and anxiety”), Pham himself entered the discussion from a more nuanced perspective.

“It's complicated,” he says. While adding anxiety disorder to the list of qualifying conditions may expand access to care for some people, he believes it is likely to have little impact on his patient population, who tend to be low-income and often new to the country. Medical cannabis is relatively expensive, so, even if it were helpful for treating anxiety, most of Pham's patients could not afford to use it. “If the cost was lower, this would be a different conversation,” he says. “I can think of just three or four patients of mine who are on medical cannabis for different conditions, but they can afford it.”

Alik Widge, MD, PhD, is an assistant professor of psychiatry and researcher at the University of Minnesota and a member of the MMA ethics committee. In his work with individuals living with treatment-resistant mental illness, Widge says he has met plenty of people who come to his office and admit to significant cannabinoid use. Patients tell him this attempt to use cannabis to relieve their symptoms works, Widge says, but, “It is hard to figure out if it is really helping them or if it is harmful or is it just neutral.”

Widge agreed to join the working group, but made it clear going in that he was, “open-minded but leaning against large-scale use or blanket endorsement.”

He felt that the range of opinion among members of the group was a fair representation of the state's medical community: “There were members who were firmly anti- and nothing could convince them.” There were also, Widge adds, “People like

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me, in the middle—and people who were firmly on the side of, ‘Cannabis treats anxiety and it’s better than any other medication.’”

Did the needle budge?

The work group wasn’t expected to reach a unified conclusion on certification, but some members’ positions did shift one direction or another.

“Our discussions moved me a little further away from skepticism,” Widge says, “but just a small amount. I am not at a point where I would actively recommend cannabis products to my treatment-resistant patients, but I am willing to accept that it could be helpful for persons with the right treatment plan.”

Pham says he isn’t surprised that most members of the group left the meetings holding on to a version of their original opinion: “There is a diversity of opinion on this. With all of the providers that were there, it would be hard to provide a clear recommendation.”

He also says that he left the meetings with a new understanding of why some providers continue to resist this change: “I think a lot of physicians don’t want to be in the place of having the card to hold this type of medication for patients. It feels too risky”

There was a general agreement among working group members that adding anxiety to the list of qualifying conditions would give physicians and researchers an opportunity to make a deeper study of the drug’s efficacy. Because of cannabis’ classification as a Schedule I narcotic, few reputable research studies exist.

“Minnesota’s cautious approach to this is particularly interesting and might allow us to figure some things out,” Widge says. “I don’t think my participation in the group changed my positions as much as they offered another opportunity for me to say, ‘If we are going to do this in a data-driven way, what are the outcomes we need to measure?’”

Pham agrees. Adding anxiety to the list of qualifying conditions could, he says, “be an opportunity to more closely study it, to see if it is truly safe or not. If we make

it legal, we can better control it and the products that are available to the public.”

Widge says that one area where the group found common ground was the belief that any medication, including cannabis, should not be a replacement for talk therapy.

“We all agreed that anything that reduces engagement in psychotherapy is a bad thing,” he says. “We agreed that the gold-standard treatment for anxiety is psychotherapy, especially the exposure method.”

In July, the working group’s detailed report was released to the public, with the pros and cons of three potential pathways highlighted for consideration: maintain the status quo and deny future petitions until clinical evidence is available, approve a limited set of sub-conditions for those at greatest risk for debilitating illness and who have the highest potential to be prescribed benzodiazepines, or approve anxiety disorder as a whole.

The group’s conclusions help move the state one step further toward a decision on medical cannabis, Tholkes says. That’s important, because as many as 31 percent of Americans are touched by anxiety disorder and many are seeking treatments that work better than the existing ones. She and her colleagues at the Department of Health want to provide safe ways to help ease their symptoms.

Tholkes is thankful that members of the working group were willing to take part in what may seem to them like an overly clunky governmental process: “We already know what the general public thinks about this issue. What we were trying to do with these meetings was measure, ‘What does the health care community think?’”

The working group meetings were, she says, “really rich, respectful, professional discussions. Members were really sharing their practice and treatment experience and their concerns about the lack of research. Their participation helps move us forward from a more informed perspective, and that’s exactly what we were looking for.” **MM**

Andy Steiner is a Twin Cities freelance writer.

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PRESCRIBING CANNABIS

Help patients and their employers find middle ground

BY DAVID G. WAYTZ

I am a lawyer who is married to an oncologist, which means I understand some of the concern and skepticism that physicians have regarding medical cannabis. I understand there may be a dearth of high-quality studies on cannabis and you may be unsure about its medical effectiveness. I also know that many physicians have discomfort surrounding the legal aspects of medical cannabis as well.

As an employment lawyer, I spend a lot of time with clients who are employers that want to do the right thing. They want a safe and welcoming work environment and they are willing to accommodate and employ people in accordance with the law.

My clients share the same concerns about medical cannabis that some physicians do. When a client has an employee or applicant using medical cannabis, my clients are also concerned about workplace safety and whether such usage complies with the law. The use of medical cannabis is somewhat inextricable from a patient's employment status.

As physicians, you play an important role in certifying patients for medical cannabis. By going beyond the certification process, you can inform and help your patients navigate these employment issues. Here are my tips.

Understand and explain the confusion first

Minnesota's medical cannabis law has strong written protections for employees using medical cannabis, but employers may be confused about applying the protections. Under Minnesota law, employers may not take adverse action against an employee or applicant based on their status as a medical cannabis patient or a positive drug test due to the use of medical cannabis unless:

- The employee was impaired, using or possessing medical cannabis at work.
- The failure to take adverse action would cause the employer to violate federal law or regulations or cause an employer to lose a monetary or licensing-related benefit under federal law or regulation.

What does that mean? Cannabis is still illegal at the federal level and some employers have requirements under federal law that conflict with state protections. That is a tricky position to be in. And what happens if an employer drug tests an employee who uses medical cannabis? Does the positive test indicate the employee was using or impaired at work or is it just a reflection of therapeutic usage?

How can physicians help?

Inform

Your responsibility as a physician goes beyond certifying that a patient has a quali-

fying medical condition. As part of your discussion regarding treatment options, I recommend:

- Explaining to patients that medical cannabis usage may implicate their employment status.
- Reminding patients that medical cannabis can cause impairment and explaining to them that they should consider how this usage might affect any requirements (drug testing or otherwise) of their job.
- Understanding the nature of your patient's job, including any safety sensitivity that might make the patient's cannabis use problematic.
- Suggesting that your patients consult legal counsel (not me) or proactively talk to human resources at their company.

In Minnesota, employers may only drug test if they have a written testing policy that complies with certain requirements. Ask patients to see if such a policy exists, so they can determine whether their employer tests for cannabis and in what situations.

When considering prescribing medical cannabis, the patient's health will be paramount to you and them. However, it is important they consider the employment aspects, too, since a person's livelihood has a big impact on their physical and mental health.

Talk about dosing with your patients and help them avoid impairment

As I mentioned, employees may not use, possess or be impaired by medical cannabis at work. To help avoid impairment and to assist your patients who need to discuss their medical cannabis usage with employers, consider the following:

- Whether the patient would be able to potentially benefit from medical cannabis by using it only after work or at night, and recommend that schedule.
- Recommending the lowest possible effective dosage.
- Alternative therapies if patients cannot avoid impairment with cannabis usage.

By following these recommendations, you give your patients a roadmap to discuss their usage with employers who may be concerned about safety. In the event that a patient tests positive for medical cannabis, they can explain to their employer that they never use cannabis before work and that they are taking the lowest therapeutically effective dose. With this information, you and your patient can help their employer feel more comfortable about your patient's commitment to safety.

Smoking or no smoking?

According to a recent story on MPR ("Major change to Minnesota's medical cannabis law approved"), Minnesota's

medical cannabis program is among the country's most restrictive. As part of those restrictions, patients previously could only use medical cannabis in liquid, oil, and pill forms.

A recent change to the law, however, will soon allow patients to use cannabis the old-fashioned way, by smoking the dried plant buds. This change in the law (which potentially will be implemented in March 2022) is expected to cut costs of the drug and consequently increase the number of patients interested in medical cannabis.

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PRESCRIBING CANNABIS Help patients and their employers find middle ground

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While smoking cannabis may be cheaper for your patients, it may not be the best option for those navigating a tricky employment law landscape. I recommend discussing the following with your patients:

- Previous delivery options (i.e. liquid, oil and pill) may provide an easier way for patients to monitor dosing and potential impairment.
- If employers smell cannabis on clothes or personal items, will they suspect impairment or improper usage while the employee is on the clock?
- Is there a cultural bias against smoking that is not present with taking a pill?

It may not be fair, but patients should understand the possible consequences. Recall the discomfort you may feel about certifying patients for medical cannabis usage? Employers may feel the same way about your patients who are participating

in this relatively new program and it is important that patients are fully informed about *all* the benefits and risks associated with cannabis use.

Get your patients ready to explain how they use medical cannabis

While I do not recommend employees or applicants volunteer more medical information than necessary, you can prepare your patient by encouraging them to discuss with their employer:

- The patient's understanding that they will never use, possess or be impaired at work.
- The steps the patient is taking to avoid any potential for impairment (i.e. low dosages and only after work).

By preparing your patients for these conversations, you can help them succeed at work and can help employer clients like

mine feel comfortable when presented with these issues.

Conclusion

In my practice, I have found that navigating a tricky employment issue is not rocket science—or even rheumatology (apologies to my father the rheumatologist). With forethought, flexibility and transparency, employers and employees can work together to solve most problems and find middle ground. **MM**

David G. Waytz is a lawyer and litigator at Fredrikson & Byron in Minneapolis. He counsels employers on employment issues and works with businesses to prevent trade secret theft and unfair competition.

This article is for information purposes only and should not be construed as legal guidance. It is meant as a starting point to begin thinking about best practices and ways everyone can work together within the confines of our relatively new medical cannabis regime.



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MEDICAL CANNABIS COMES OF AGE IN MINNESOTA

It's time for physicians to be more involved with the program

BY GEORGE REALMUTO, MD

In 2015, most in the medical community didn't want to have anything to do with medical cannabis, for a number of very good reasons, including the possibility of jeopardizing our DEA privileges to prescribe controlled medications if we prescribed the federally-restricted Schedule I cannabis.

We also didn't know very much about how CBD (cannabidiol) and THC (tetrahydrocannabinol) were different and how they should be used clinically. In a plant like cannabis, with something like 200 molecules, what else might be going on?

Because of the DEA restrictions, there was hardly any research on cannabis, and what research there was tended to be from low-potency plants that were 50 years old, not current, and likely much less psychoactive than today's cannabis.

The knowledge base just wasn't there and there was a potential for harm. Like virtually all physicians—and the Minnesota Medical Association (MMA)—I didn't want anything to do with prescribing medical cannabis. The legislated development of Minnesota's Medical Cannabis Program in 2015 reflects the arms-length distance physicians preferred.

But that was six years ago. I believe that it's time for physicians to be more involved in the Medical Cannabis Program, and I think it's time for MMA to reevaluate what physicians' roles should be in the program, especially because of proposed legislation that will affect it.

Today, there are many scientific monographs on the difference between CBD and THC. We know more specifically about the harm cannabis may have on the developing brain from fetus to 25 years old and the increase in the incidence of

schizophrenia from today's high-potency cannabis. Alternatively, we have mostly anecdotal reports about improvements in functioning of people who have certain disorders or symptoms, conditions such as autism, for which we have little therapeutic firepower. Medical cannabis became a last resort for treatment—and it seemed to help some patients.

Another change since 2015 was determining the potency of the cannabis dispensed. Now, quality and potency are established.

There are now 14 qualifying conditions, plus chronic and intractable pain, that are state-approved for medical cannabis. At a dispensary, a pharmacist helps a patient we have certified with such a condition to choose a compound of cannabis—dosage and method of delivery. Patients complete rating scales so the pharmacist and dispensary know not only the dose given, but the response to the dose.

Which is great—except that once having certified a patient for medical cannabis, the physician is mostly out of the loop. We certify, but we aren't prescribing either the cannabis compound or the dosage and the patient's experience with medical cannabis is not a part of our electronic medical record (EMR). With neurodevelopmental and other cognitive and motivational issues related to cannabis, and with other medications prescribed and disorders being treated by the physician, we are much less of the treating physician than we should be.

Cannabis is like a lot of other medications, in that you don't know exactly how your patient is going to respond, but using the old axiom of go low and start slow, through a clinical interview and a func-



I think—and my position has definitely changed in six years—that the physician is in a great spot to be engaged with the Medical Cannabis Program. We know our patients; we know their family condition, we know their socio-economic status, we know what other medications they are taking, we know their medical history, we know their social history.

tional or disease-specific ratings scale, the physician will know how the patient responds, so we can adjust the dosage of medication as needed. That's what we do as physicians.

I think—and my position has definitely changed in six years—that the physician is in a great spot to be engaged with the

Medical Cannabis Program. We know our patients; we know their family condition, we know their socio-economic status, we know what other medications they are taking, we know their medical history, we know their social history.

With data about medical cannabis and our knowledge of our patients, we can match dosage to the patient. We should have opportunities to consult with a pharmacist—as we do for other medications—to hear their perspective on medication interactions and then make informed medication decisions.

In six years, the number of patients certified for use of medical cannabis has gone from about 800 to more than 36,000, and that number is accelerating. The number of healthcare practitioners in the program is now just under 2,000 and, although that number also is increasing, it is doing so more slowly and not matching the increase in the number of conditions and the number of patients. We need more physicians engaged in the program, and

we need physicians to guide pressing legislation around the program.

My specific recommendations include:

- Registry of the patient, potency of the drug they use and their rating forms becomes a HIPAA-compliant downloadable into my EMR for data. I would follow that with the patient and the pharmacist, so I would be a participant, rather than an observer, of what is going on now with the pharmacist and the dispensary.
- Make sure that what is being offered by the Minnesota Department of Health and otherwise in CME is reliable and scientific. Make sure that what's on the Office of Medical Cannabis website is scientific. I want the hard-science researcher to inform me that the condition that I am treating and cannabis have a theory basis for benefit.
- Improve the quality of the disease-specific rating scale used by the Medical Cannabis Program. They have a very good researcher within the Office of

Medical Cannabis, which is great, but we are the clinicians that should inform choices.

- Consider how information technology may improve our clinical decisions by developing a best practices symptom-specific-by-dose clinical algorithm.
- Involve physicians in the Office of Medical Cannabis' search for a new vendor to make its software more user-friendly. We're the users; we are the ones who can evaluate what is friendly for our use.

MMA, representing physicians, should become actively involved in working with the Office of Medical Cannabis as the program grows and tackles new challenges—like the recently approved smokable cannabis as a delivery option. If MMA is not at the table, decisions will continue to be made by people other than those who work with patients. **MM**

George Realmuto, MD, is a retired psychiatrist and professor emeritus at the University of Minnesota, with special interest in ADHD and autism.

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STRANGE TIMES INDEED

2021 Legislative Session in Review

When the 2021 Legislative session began in early January, it seemed as if the 2020 session had never ended. Over the summer and fall of 2020, legislators continued gathering each month for special sessions called by Gov. Tim Walz so that he could extend his peacetime emergency powers to address the COVID-19 pandemic. Masks continued to be mandatory for legislators on Capitol grounds. The Capitol complex closed to the public. And social distancing was the norm.

It was déjà vu all over again.

The weirdness continued this year in a discordant session that ended with the GOP and the DFL unable to reach an agreement on a budget. When the constitutionally mandated end came on May 17, legislators knew they would be called back for another special session in June. They continued to negotiate both financing and policy differences after the session conclusion and came back for one more special session on June 14. Unlike other special sessions, this one lasted more than one day. In fact, legislators worked all the way up to the end of the fiscal year – June 30. Fortunately, they were able to reach agreements and avoided a government shutdown.

Despite the strange session(s), the MMA successfully shepherded several bills that became law that will improve the practice of medicine in Minnesota. Specifically, the use of telehealth has been expanded, providing more Minnesotans access to care.

Following is a review of the 2021 session including reports on MMA priorities as well as other healthcare-oriented legislation.

MMA’s priority issues at the Legislature

ISSUE	RESULT
Preserving access to care	In late February, the state budget office announced that instead of an anticipated deficit the state had a surplus. This meant the call for reducing budgets for safety net programs would not materialize. Legislative action: Successfully protected our healthcare safety net programs from cuts and expanded coverage for new mothers.
Ensuring telehealth flexibility and parity	The MMA advocated for expanded, ongoing coverage for telehealth and telephone services. This effort garnered bipartisan support to continue coverage for services from a patient’s home and to include audio-only services. However, legislators weren’t completely comfortable with this large expansion, so they included a sunset for the audio-only coverage in 2023. This will force the Legislature to review how it’s working. Legislative action: Passed and signed into law.
Protecting patient access to prescription drugs	The MMA pushed for limiting drug formulary changes by insurers or pharmacy benefit managers (PBMs) for patients who are experiencing success with a medication. Enrollees are bound by a contract to remain in a health plan for a year; Insurers should not be able to change the coverages within that health plan during the year. Legislative action: Legislation did not advance this session.

Other health-care legislative issues

ISSUE	RESULT
Abortion facility licensure	Background: Bill would have licensed facilities that perform more than 10 abortions per month. Legislative action: Passed the Senate but did not receive a hearing in the House. MMA position: Oppose
Broadband access expansion	Background: Law allocates \$70 million to provide grants to local communities to expand broadband access statewide. This is critical for telehealth, but also for schools to provide distance learning. Legislative Action: Passed and signed into law. MMA position: Support
Contact tracing & immunization requirements	Background: The House bill appropriated money to expand contract tracing. The Senate bill would have prohibited any contact tracing without the consent of the individual and it also attempted to prohibit requirements by government or employers to require employees to receive a COVID-19 vaccine. Legislative action: Both bodies passed their different versions of the bills, but they did not pass into law. MMA position: No position
COVID-19 vaccine equitable distribution	Background: Law creates a new position at the Minnesota Department of Health to ensure the equitable distribution of COVID-19 vaccines to disproportionately impacted communities. Legislative action: Passed and signed into law. MMA position: Support
COVID-19 vaccine Medicaid reimbursement	Background: Law increases the Medical Assistance (MA) reimbursement rate for administering the COVID-19 vaccine to the Medicare level. Legislative action: Passed and approved by the Centers for Medicare and Medicaid Services. MMA position: Support
Diversity training for OB programs	Background: To address racial disparities in maternal mortality and morbidity, this law requires hospitals with obstetric services to provide continuing education on anti-racism and implicit bias. Legislative action: Passed and signed into law. MMA position: No position

ISSUE	RESULT
Drug donation	Background: The law allows healthcare facilities to donate excess over-the-counter drugs to uninsured Minnesotans who cannot afford needed medications. This expands the current drug repository for prescription drugs. Legislative action: Passed and signed into law. MMA position: Support
Firearm safety and prevention	Background: Two bills—expanded background checks and a “red flag law”—continued to be active at the Capitol. The former would close a loophole in requiring criminal background checks for all gun purchases, including at gun shows and in private sales. The latter would allow law enforcement to temporarily remove firearms from a person who is deemed to be dangerous to themselves or others. Legislative action: The House discussed the bills but did not move them forward. The Senate did not consider them at all this session. MMA position: Support
Inpatient psychiatric bed capacity	Background: The House held committee meetings to gather information on the loss of inpatient psychiatric beds in Minnesota. In 2020, Fairview Health Services announced that due to budget issues, it would close St. Joseph’s Hospital in St. Paul. The MMA has stressed the need for increased mental health services across the spectrum, from outpatient, community services, through emergency care, to inpatient care. Legislative action: Passed and signed into law. Includes 30 new adolescent and child psychiatric beds for Prairie Care and at least five new psychiatric beds for Regions. MMA position: Support
Mask requirement	Background: Legislation to pass into law the mask requirements included in Gov. Tim Walz’s executive order requiring wearing masks in public moved in the House but not the Senate. By passing this bill it would have allowed the Legislature to have a say in the order and not just leave it to the governor. Legislative action: None taken. MMA position: Support

(continued on next page)

Other health-care legislative issues

(continued from previous page)

ISSUE	RESULT
Medical Assistance for obesity drugs	<p>Background: This bill expanded Medical Assistance to cover obesity drugs. This has been an exclusion for many years because the department thought there was too much room for abuse.</p> <p>Legislative action: Passed and signed into law.</p> <p>MMA position: Support</p>
Medical cannabis	<p>Background: The law modifies the medical cannabis program to allow the use of raw, smokable cannabis. Minnesota is the only state that has a medical cannabis program that does not allow raw leaf. It has resulted in Minnesota's products being more expensive than other states because of the added cost of processing the product into pills or oils.</p> <p>Legislative action: Passed and signed into law.</p> <p>MMA position: Neutral</p>
Organ transplant programs	<p>Background: Bill clarifies that organ transplant programs cannot discriminate against a patient based on the person's mental or physical disability. This is in response to reports that some programs were disqualifying people who had certain conditions, such as Down syndrome.</p> <p>Legislative action: Passed and signed into law.</p> <p>MMA position: Neutral</p>
Pharmacy gag clause	<p>Background: Bill strengthens current prohibitions on pharmacy benefit managers (PBMs) who keep pharmacists from discussing drug prices with patients. Referred to as "the pharmacy gag clause," the bill allows pharmacists to discuss the cost of a drug with a patient, including what the pharmacist is reimbursed by the PBM.</p> <p>Legislative action: Passed and signed into law.</p> <p>MMA position: Support</p>
Postpartum care	<p>Background: Bill expands Medical Assistance (MA) coverage for pregnant women to cover postpartum care for 12 months, effective July 1, 2022. Current law only covers 60 days postpartum for some MA enrollees.</p> <p>Legislative action: Passed and signed into law.</p> <p>MMA position: Support</p>

ISSUE	RESULT
Price transparency	<p>Background: Bill would have increased price transparency on the drug cost by establishing a drug pricing board, similar to the Public Utilities Commission for electricity. This came from the Attorney General's task force on drug prices.</p> <p>Legislative action: Strong support in the House but did not receive a hearing in the Senate.</p> <p>MMA position: No position</p>
Provider credentialing	<p>Background: Bill requires health plans that credential providers to make their decisions on a "clean application" within 45 days. This addresses delays in credentialing that were making it difficult for physicians and other providers in billing health plans.</p> <p>Legislative action: Passed and signed into law.</p> <p>MMA position: Support</p>
Public option	<p>Background: This legislation is intended to provide an affordable option for health coverage for low-income Minnesotans. The bill would provide subsidies to purchase MinnesotaCare for those earning less than 400 percent of the federal poverty level. Current law caps eligibility at 200 percent. It would also allow those earning between 400 and 500 percent to purchase MinnesotaCare at the full premium cost as well as allow employers with 50 or fewer employees to purchase it for their employees. These changes would be phased in over three years.</p> <p>Legislative action: Included in the House Health and Human Service budget bill but was not agreed to by the conference committee.</p> <p>MMA position: The MMA supports public option proposals that meet certain principles including: limited to counties where there are one or fewer private options; payment levels that are set at Medicare rates or higher; and with an upper limit on income based on an affordability level.</p>
Recreational cannabis	<p>Background: Bill would legalize and regulate the sale and use of recreational cannabis for adults.</p> <p>Legislative action: Passed the House, but received no hearings in the Senate.</p> <p>MMA position: Neutral as long as there are strong public health components included.</p>

Other health-care legislative issues

(continued from previous page)

ISSUE	RESULT
Reporting pregnant women on controlled substances	<p>Background: Bill removes a requirement for a physician or other healthcare provider treating a pregnant woman from reporting her to social services if she is using a controlled substance during her pregnancy. This is intended to remove a barrier that results in women not accessing prenatal care because of fear of being reported.</p> <p>Legislative action: Passed and signed into law.</p> <p>MMA position: Support</p>
Tobacco tax increase and prevention programs	<p>Background: Several bills addressed a variety of tobacco issues including: raising the tobacco tax by \$1.50 per pack; conforming Minnesota law to the recently passed federal law related to taxing e-cigarettes; dedicating \$15 million each year from the money raised on tobacco taxes to the tobacco use prevention and cessation account for tobacco cessation projects, public information programs, and other tobacco prevention programs; allocating \$10 million to the University of Minnesota School of Public Health for tobacco prevention activities; dedicating \$15 million of the existing tobacco tax to prevention and cessation programs; and prohibiting the sale of any tobacco products or e-cigarettes that are flavored, including menthol tobacco. The final bill that passed allocates \$4 million each year to tobacco and vaping prevention and cessation programs.</p> <p>Legislative action: Passed and signed into law.</p> <p>MMA position: Support</p>



How does an issue become an MMA priority?

The MMA Board of Trustees defines MMA priorities based on the input from our physician members through their participation in committees, task forces, policy forums, the Policy Council, The Pulse, listening sessions, member events, surveys and online discussions. MMA policies serve as the foundation for our legislative, regulatory and administrative advocacy efforts during the legislative session and throughout the year.

To get involved in MMA legislative and grassroots efforts, contact someone from our legislative or member relations teams.

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News Briefs



MN Supreme Court agrees to hear medical malpractice case

The Minnesota Supreme Court has agreed to take on a medical malpractice case from 2014 that is of great interest to the MMA and other healthcare entities.

In April 2021, the MMA, in partnership with the Minnesota Hospital Association (MHA), submitted a brief urging the Court to review a Court of Appeals ruling.

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

The Court of Appeals said that the treating physician could have foreseen the violent acts because they prescribed a medication that had a black-box warning of violence and aggression and that more should have been done by the treating team to prevent the violent act from occurring.

The MMA, AMA and MHA have submitted a joint amicus brief to the Supreme Court explaining how this expansion of liability would negatively impact the mental health system in Minnesota. Specifically, this ruling would hurt the “emphasis on outpatient mental health treatment, patient confidentiality, and limiting provider liability” by promoting more extreme clinical measures, such as involuntary commitment, when faced with an individual with a mental health condition. The MMA is also concerned about the burden this ruling places on providers to warn third parties of a patient’s unforeseeable violent behavior.

Task Force on emergency department boarding to reconvene

The Emergency Department Boarding Task Force, which was co-created by the MMA and Minnesota Chapter of the Ameri-

can College of Emergency Physicians (MNACEP), is beginning to meet again. The group, which was put on hold during the COVID-19 pandemic, will reconvene this month (September) and share its recommendations to the MMA Board of Trustees by the end of 2022.

The MMA and MNACEP established the task force in 2019 to examine the escalating problem of the boarding of patients with mental-health issues in emergency departments.

The group is exploring a portfolio of interventions that in combination might serve to lessen the complex problem of ED boarding. These interventions include upstream interventions, including EmpPATH Units and community-based mental health supports; immediate interventions, including investments in in-patient psychiatric beds; and downstream interventions, including community transition supports that offer continuity of care in outpatient settings.

If you are interested in serving on the task force, email auphoff@mnmed.org.

Minnesota joins coalition to receive billions from opioid manufacturer, distributors

In July, Minnesota Attorney General Keith Ellison joined a large multistate coalition in announcing a \$26 billion agreement with opioid manufacturer Johnson & Johnson and the nation’s three top pharmaceutical distributors—Cardinal, McKesson, and AmerisourceBergen—that will bring much-needed relief to communities in Minnesota that have been devastated by the opioid crisis.

Minnesota’s share of this agreement could be as much as \$337 million over 18 years, with significant payments frontloaded in the first five years. The spending of State of Minnesota funds from the agreement will be overseen by the State’s Opioid Epidemic Response Advisory Council.

The agreement also requires data transparency and significant industry changes that will help prevent this type of crisis from reoccurring. The agreement would resolve investigations and claims against these companies of the nearly 4,000 states and local governments across the country that have filed lawsuits in federal and state courts.

The 10-year agreement will result in court orders requiring Cardinal, McKesson, and AmerisourceBergen to:

- Establish a centralized independent clearinghouse to provide all three distributors and state regulators with aggregated data and analytics about where drugs are going and how often, eliminating blind spots in the current systems used by distributors.

On the calendar

Event	Date
2021 Virtual Annual Conference	September 24, 2021
MMA Day at the Capitol	March 1, 2022

- Use data-driven systems to detect suspicious opioid orders from customer pharmacies.
- Terminate customer pharmacies' ability to receive shipments
- Report to state regulators companies that try to divert shipments to pharmacies.
- Prohibit the shipping of suspicious opioid orders.
- Prohibit sales staff from influencing decisions related to identifying suspicious opioid orders.
- Require senior corporate officials to engage in regular oversight of anti-diversion efforts.
- The 10-year agreement will also result in court orders requiring Johnson & Johnson to:
 - Stop selling opioids.
 - Not fund or provide grants to third parties for promoting opioids.
 - Not lobby on activities related to opioids
 - Share clinical trial data under the Yale University Open Data Access Project.



AMA Foundation launches new fellowship program for LGBTQ+ community

The AMA Foundation has launched its National LGBTQ+ Fellowship Program that is intended to transform the health equity landscape.

Launched in July with a \$750,000 grant from the AMA Foundation, the program is designed to revolutionize healthcare for LGBTQ+ individuals by providing advanced fellowship training for physicians—who are “first-contact” doctors for their patients’ medical needs—in ways to optimize the health of LGBTQ+ patients. The ultimate goal of the program is to ensure that all LGBTQ+ patients receive the highest standard of care.

The announcement marks the first chapter in the Fellowship Program’s nationwide effort to train hundreds of fellows, while developing multi-disciplinary standards of care for LGBTQ+ health to educate the next generation of physician leaders. The result will be a workforce of LGBTQ+ health specialists and a rich body of knowledge that can be passed on to all medical schools and healthcare professionals by establishing best practices in caring for LGBTQ+ patients.

In a stringent peer-reviewed process, the AMA Foundation selected the University of Wisconsin School of Medicine and Public Health for the award due to its extensive multidisciplinary network of institutional and community leaders with expertise in LGBTQ+ health. The school’s interdisciplinary collaborative fellowship will build on existing foundations of diversity, equity, and inclusion strategies that support affirming LGBTQ+ services and will accelerate education, research, and clinical initiatives.

ICSI Institute for Clinical Systems Improvement

ICSI to cease operations at end of 2021

Leadership at the Institute for Clinical Systems Improvement (ICSI) have decided to cease operations at the end of 2021 due to declining financial support.

ICSI was formed in 1993 to drive quality improvement through practice guideline development and dissemination. The independent, nonprofit organization’s work evolved over time to include prevention of hospital readmissions, opioid prescribing standards, suicide prevention and intervention and a collective effort on racial equity in healthcare.

“ICSI has been a valuable partner and powerful example of Minnesota’s collaborative healthcare improvement tradition,” says MMA CEO Janet Silversmith. “We appreciate all they have contributed and are prepared to assist in any way we can to sustain cross-organizational improvement.”

ICSI expects to complete some of its current efforts in 2021, while others will transition to different organizations.

Report: more than half of U.S. docs are now employed physicians

According to a report issued by the AMA in late May, 2020 was the first year in which fewer than half of patient care physicians worked in a private practice, a drop of nearly 5 percentage points from 2018.

The report also found that 17.2 percent of physicians were in practices with at least 50 physicians in 2020, up from 14.7 percent in 2018.

The report describes changes in physician employment status and practice size, type and ownership between 2012 and 2020. The content of the report is based on the AMA’s Physician Practice Benchmark Survey.

Although the 2020 data are consistent with earlier trends, the size of the changes since 2018 suggest that the shifts toward larger practices and away from physician-owned (private) practices have accelerated.



FROM THE CEO

Pushing through the frustration

Frustrated! Nearly everyone I've talked to recently feels the same and I imagine you do as well (although you might use a more colorful adjective to describe your feelings). The reason for the frustration is clear—the Delta variant is rampant, and infection rates and hospitalizations are surging. Amid the increase in cases, vaccination rates remain stubbornly low in some areas and several states have made it illegal for schools and businesses to enact policies, such as mask usage, that would help keep people safe. The optimism that widely accessible vaccines and springtime weather promised just a few months ago seems like a distant memory.

In April, the *New York Times* published an article by Adam Grant, "There's a Name for the Blah You're Feeling: It's Called Languishing." The article resonated with me at the time (as I anxiously awaited my second vaccine dose) and I've been thinking more about it over the past several weeks. Grant noted that languishing "dulls your motivation, disrupts your ability to focus, and triples the odds that you'll cut back on work." I see these characteristics in so many people and can imagine how easy the slide could be for many more.

Even the usual spectacle of the Summer Olympics seemed to languish, despite many extraordinary performances (kudos, Minnesota Olympians!). There were empty stadiums, awkward video chats with families and results announced prior to primetime broadcasts due to time zone differences. An unexpected silver (pun intended) lining of the Olympics was the gift provided by world renowned gymnast Simone Biles—the gift to admit

that it's okay to not be okay, even when the stakes are high. The stakes, of course, are high for physicians; and it may be a patient's life on the line, not just a gold medal.

There are many lessons to be learned from this pandemic and, thanks to the variants, I guess we are continuing to learn. At the MMA, we have maintained our resolve to push back against misinformation and to protect the health of Minnesotans. For example, in partnership with the Minnesota Academy of Family Physicians and the Minnesota Chapter of the American Academy of Pediatrics, we contacted the superintendents of every Minnesota school district to urge them to adopt universal mask use in K-12 schools for all students, teachers, staff and visitors regardless of vaccination status, consistent with CDC and health department guidance.

As Grant advised in his *Times* article, one way to transcend languishing is to focus on a "just-manageable difficulty ... a challenge that matters to you ... a worthwhile goal, a meaningful conversation." The post-COVID world remains elusive, and the current resurgence is extremely frustrating. But we remain focused on our worthwhile goal—to make Minnesota the healthiest state and the best place to practice. That work helps to ease the frustration, it matters and it makes a difference. **MM**

Janet Silversmith
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VIEWPOINT

Gratitude

From the beginning of the COVID-19 pandemic, Minnesota's physician leaders have met the challenge of our time and tried to lead by example. It hasn't been easy, especially when so many of us are on the frontlines doing what we can to save lives and keep as many Minnesotans healthy as possible. It's not been enough just to keep our wits about us and do our daily work. Early on we recognized the magnitude of this pandemic and we knew it was in everyone's best interest to take that extra step, to go that extra yard to get in front of it. So, when we were asked to do more, to stretch a bit, we all did so in an unprecedented show of sacrifice and camaraderie.

To all my fellow physicians who stepped up, it is against this background that I humbly say—thank you! You've made a difficult few years that much more manageable. You've been true leaders.

Thank you:

- To my fellow MMA leaders who brought the voice of practicing physicians to state decision-making tables on the COVID-19 response. You have advocated on behalf of those in healthcare at the Legislature, protecting the health of fellow Minnesotans and fighting on behalf of those who practice medicine.
- To those who have dedicated their time to serve on committees and task forces that improve how we practice while always advocating for our patients.
- To those who have offered their time to help with the Minnesota Department of Health and Blue Cross Blue Shield COVID bus that has taken the vaccine program out to Minnesotans across the state.
- To those who have gone out into their community and spoken at churches and in barbershops to help educate vaccine-hesitant Minnesotans. Your influence and dedication to fighting miscommu-

nication regarding what it takes to join together to combat COVID-19 is greatly appreciated.

- To those who have joined our new Well-Being Advisory Committee. Your dedication to improving the health and well-being of your peers and physicians across the state is admirable and much needed. Physicians have always faced tremendous pressure in their work. The pandemic has only magnified that stress and to know their peers have their back is reassuring.
 - To those in our new work group who are examining the barriers that people of color face in navigating Minnesota's medical school and residency processes. You are positioning organized medicine at the forefront of the health equity and access discussion especially when it comes to how we can impact the fabric of our future work force to better match the population served.
 - To my fellow Board of Trustee members for volunteering your time to help guide the MMA as it continues to meet the needs of Minnesota physicians especially in this COVID-19 era.
 - To our AMA delegation for your work in helping to influence national policy. Providing that crucial linkage to physician leaders across the nation is vital in representing the house of medicine at the highest levels.
 - To physicians in public service who are helping shape policy that is patient-centric and takes into consideration physicians and everyone on the care team.
- Again, a sincere great thanks to you all. Leadership comes in many ways. I'm grateful for the leadership of so many physicians in these times, including those who continue to steward the MMA and help us accomplish our mission to be the healthiest state in the nation as well as being the best place to practice medicine. **MM**



Edwin Bogonko, MD, MBA
MMA Board Chair

PHOTO BY KATHRYN FORBES

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physicians who stepped
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You've been true leaders.

2021 abstract submissions reflect today's medical concerns

Minnesota Medicine invited medical students, residents and fellows to submit abstracts and case studies for possible publication and presentation at the Minnesota Medical Association virtual annual conference in September. A total of 28 physicians in training submitted abstracts and case studies, with topics ranging from how racism impacts primary care patients to a sudden case of multi-organ failure.

Minnesota Medicine is publishing nine of the top-reviewed submissions in this issue of the magazine. Some also will be presenting virtual posters at the MMA Annual Conference, September 24.

Reviewers Devon Callahan, MD, and Vedavathi Bellamkonda-Athmara, MD, looked at each manuscript to determine whether the research or case description was clear and complete, whether the methodology was sound, whether the scientific literature review was sufficient and whether the findings had implications for future research. Reviewer's comments were sent to all those who submitted so they could revise abstracts for publication or simply learn from the comments.

Radiographic findings in anti-MOG antibody-associated diseases— a pediatric case series

BY THOMAS HOUGHLAND AND DAVID NASCENE, MD

Myelin Oligodendrocyte Glycoprotein (MOG) antibody-associated diseases (MOGAD) represent a collection of demyelinating disorders of the central nervous system. MOGAD is a distinct diagnostic entity defined by the presence of anti-MOG IgG antibodies, however these diseases have similar clinical presen-

tations to acute demyelinating encephalomyelopathy (ADEM), neuromyelitis optica spectrum disorder (NMOSD) and multiple sclerosis (MS).¹ Manifestations of MOGAD commonly include mono- or polysymptomatic disorders that may involve gray or white matter structures in the brain or spinal cord, and may manifest

as sensory, motor, visual, or cognitive deficits.^{2,3} We report a case series of MOGAD identified in seven pediatric patients.

Methods

Seven pediatric patients were identified as having seropositive anti-MOG associated diseases. Brain MRI sequences obtained during acute disease flares and follow-up imaging were reviewed for all patients. Four of the seven patients had spinal MRI imaging acquired.

Results

At the initial time of disease assessment, the patients in our series ranged from ages 2–14 years. Five of the seven patients were male, and all patients had positive anti-MOG IgG. Symptoms during the course of disease included vision loss, headache, ataxia, hyperreflexia, behavioral changes, speech impairment, and seizure. Six of the seven patients had monophasic courses of illness with the remaining one having recurrent symptoms.

Five of the seven patients showed evidence of optic neuritis on brain MRI. Three (43%) of these patients had optic neuritis as the sole radiographic finding. Three patients (43%) had lesions on MRI involving the cerebellum. Two of the seven patients (29%) had lesions of deep-gray-matter structures, including the thalamus and basal ganglia. One patient (17%) had T2 hyperintense focus on MRI involving the cervical spine.

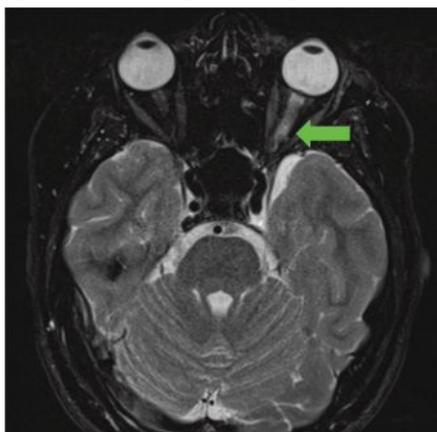


FIGURE 1

Contrast-enhanced MRI axial view reveals T2 enhancement and thickening of the left optic nerve (green arrow), consistent with findings of optic neuritis.

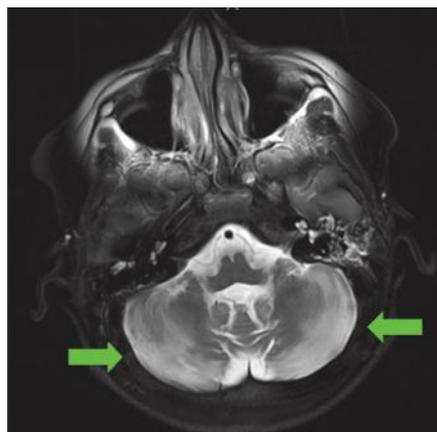


FIGURE 2

MRI axial view demonstrates patchy hyperintensity in the cerebellum bilaterally (green arrows) on T2 fat suppression sequence.



FIGURE 3

Non-contrast MRI sagittal view demonstrates abnormal T2 hyperintensity and expansion of the cervical spine (green arrow).

Discussion

MOGAD is emerging as a recognized subset of demyelinating diseases, with the initial few cases being reported just within the last 10 years.⁴ MOGAD has the highest prevalence of seropositivity in children 10 years of age and younger, but may occur in adults as well.⁵ Although the radiographic findings of MOGAD can be variable and similar to those in ADEM, NMSOD, and MS, there are certain imaging findings that are more typical of MOGAD.

As is exhibited in our case series, optic neuritis (ON) is the most common finding in pediatric patients with MOGAD, and may be the sole finding.^{2,6} Brainstem, spinal cord, and deep gray-matter lesions on MRI may also be seen in MOGAD, with brainstem and gray-matter lesions being more common in children.² Patients with

MOGAD typically receive corticosteroids for treatment early in the disease course, and may require intravenous immunoglobulin or plasmapheresis, depending on the initial response and severity of the disease.⁷

Conclusion

MOGAD is a subset of demyelinating diseases which can exhibit various lesions to white- and gray-matter structures of the central nervous system. Providers should be aware of MOGAD as a clinical entity to ensure timely diagnosis and appropriate treatment. **MM**

Thomas Houghland is a fourth-year student at the University of Minnesota Medical School. David Nascene, MD, is associate professor, Department of Radiology, University of Minnesota Medical School.

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Low-dose chest CT screening and lung cancer stage migration in a rural healthcare system

BY MADELEINE HINOJOS, BS, AND NILS D. ARVOLD, MD

Smoking prevalence and lung cancer mortality are highest in rural U.S. populations, yet little is known about low-dose chest CT (LDCT) screening outcomes in rural settings. We set out to determine the stage of lung cancers diagnosed through a LDCT screening program in a majority-rural healthcare system and assess for stage migration.

Design, setting, and participants

This retrospective cohort study included a primary cohort of all subjects (n=1,805) who underwent LDCT screening between March 1, 2015 and December 31, 2019 in a Midwestern healthcare system. A secondary cohort of all patients diagnosed with lung cancer (n=840) in the same healthcare system from January 1, 2013 through February 29, 2020 was examined for stage migration between pre-LDCT (ending February 28, 2015) and LDCT eras.

Exposure

Completion of ≥ 1 screening LDCT.

Main outcomes and measures

The proportion of lung cancers diagnosed among LDCT-screened subjects that were early-stage (American Joint Committee on Cancer stage I-II).

Results

The LDCT cohort had a median age of 63 and a median 40 pack-year smoking history, 51.2% were female, 62.4% had a rural residence, and 62.7% completed only one LDCT scan. Thirty-eight subjects were diagnosed with lung cancer (2.1% of the LDCT cohort), of which 65.8% were early-stage. Older age ($P < .01$) and heavier smoking burden ($P < .01$) were associated with lung cancer diagnosis; rural residency was not ($P = .24$). At last follow-up (median, 27.6 months), 88.2% of rural vs. 87.5% of non-rural subjects with screen-diagnosed early-stage lung cancer were alive. In the secondary cohort of all lung cancer patients, 27.9% of cancers were early-stage in the pre-LDCT era vs. 38.7% in the LDCT era ($P = .01$). Rural residency was associated with mi-

gration to early-stage cancer in the LDCT era ($P = .04$); non-rural residency was not ($P = .13$). Fewer than 1% of subjects (0.6%) experienced an adverse event related to LDCT screening, nearly all of which were pneumothorax following biopsy (10/11 events), with no fatal adverse events.

Conclusions and relevance

With LDCT screening, two-thirds of diagnosed lung cancers were early-stage, independent of residency location. Migration to early-stage disease was observed in the screening era, particularly among rural residents. Increased implementation of LDCT screening might blunt the association between rural populations and worse lung cancer outcomes. **MM**

Madeleine Hinojos is a third-year student, University of Minnesota Medical School Duluth. Nils D. Arvold, MD, is medical director, Whiteside Institute for Clinical Research, University of Minnesota Medical School Duluth and a radiation oncologist at St. Luke's Hospital, Duluth.

Pemphigus vulgaris: a case report of a blistering masquerader

BY JESSICA PADNIEWSKI, DO, AND ERIN LUXENBERG, MD

Pemphigus vulgaris (PV) is a rare autoimmune blistering disorder mediated by anti-desmoglein-1 and anti-desmoglein-3 auto-antibodies, which results in acantholysis. PV typically presents in elderly patients with initial lesions in the oral cavity. Estimated incidence of PV ranges from 0.5-3.2/100,000. As with all bullous disorders, PV compromises the skin barrier and increases risk of infection and insensible fluid losses. The differential for blistering disorders is broad, including contact dermatitis, autoimmune disorders such as Bechet's or systemic lupus erythematosus, neoplastic disorders, infectious diseases such as HSV and mycoplasma, in addition to drug-related reactions to medications like NSAIDs or antibiotics. We present a case of PV which was initially thought to be disseminated rash due to HSV.

Case description

A 30-year-old female with history of papillary thyroid cancer s/p thyroidectomy presented for evaluation of painful oral lesions. She denied new medications or exposures but reported using NSAIDs intermittently for pain. She was initially diagnosed with mucositis related to NSAID use, instructed to avoid NSAIDs, and prescribed a prednisone taper. Symptoms overall improved until she took an aspirin and noted worsening oral lesions with new onset bilateral ear pain without any auditory deficit. She also reported losing about 15 pounds since onset of lesions. She denied any other symptoms.

On exam, multiple punched-out erosions with yellow granulation tissue scattered on upper and lower lips with desquamative gingivitis on the buccal mucosa were seen (Image 1). Preliminary lab work was remarkable for HSV-1 positivity and HCV-Ab positivity with negative PCR. Skin swabs and biopsy of ulcerated lesions were done. Oral PCR swab was positive for HSV and presumptive diag-

nosis of disseminated HSV was made. She was initiated on acyclovir 400 mg TID for 7 days with subsequent suppressive therapy with valaciclovir 500 mg daily. Despite this, her lesions persisted and progressed. Skin biopsy ultimately revealed intraepithelial vesiculations and acantholysis and negative direct immunofluorescence. Indirect immunofluorescence was positive with IgG to epithelium at 1:5,120 (H) with monkey esophagus and & 1:640 (H) with intact human skin which was concerning for a diagnosis of PV with mucocutaneous involvement.

Antibody testing returned strongly positive for both IgG-desmoglein1 antibodies and IgG-desmoglein3 antibodies, confirming the diagnosis of PV. The patient's skin lesions were refractory to a variety of topical treatments including clobetasol gel and ointment, fluticasone ointment, mupirocin, and systemic mycophenolate 1000mg BID and she was ultimately initiated on Rituximab infusions weekly x 4. She experienced a flare after receiving her COVID vaccination but has otherwise been stable and further improvement is expected.

Discussion

This patient's blistering rash was initially thought to be an eruption related to disseminated HSV infection. Several medications, environmental factors and infections have been identified as triggers to PV, including HSV infection (Brenner). This case exemplifies the importance of maintaining broad differentials and specifically maintaining a clinical suspicion for rare conditions. This is especially



important when treatment dramatically differs such as in the case of disseminated HSV and PV. Current first-line treatment for PV includes steroid sparing immunosuppressive drugs such as Rituximab (Anandan). Additionally, this case exemplifies the importance of prudence with COVID-19 vaccinations in patients with underlying autoimmune disorders that may flare with vaccination. **MM**

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Assessing genetic screening barriers for hereditary breast and ovarian cancer in a high-risk Minnesota population

BY JADE M. COHEN, BA; RAHEL G. GHEBRE, MD, MPH; NATHAN T. RUBIN, MS; AND ANNELISE M. WILHITE, MD

Hereditary mutations in BRCA1/2, TP53, PTEN, and other genes underlie up to 10% of all breast and ovarian cancers and significantly increase carriers' lifetime risk of cancer development by up to 5 times (breast) and 20 times (ovarian) that of the general population. Multiple organizations, including the National Comprehensive Cancer Network (NCCN), American College of Obstetricians and Gynecologists (ACOG), and Society of Gynecologic Oncologists (SGO), advise that people at high risk of hereditary cancers be identified via careful collection of personal and family cancer history. It is further recommended that eligible individuals be referred to genetic counseling with a qualified provider, followed by genetic testing to identify high-risk mutations if indicated.

Correct identification of pathogenic mutations is crucial for informed patient decision-making about cancer prevention steps including increased screening, preventive chemotherapy, and risk-reducing surgery such as bilateral mastectomy or salpingo-oophorectomy. Mutation identification is also important for at-risk family members to undergo genetic evaluation if desired. Our aim was to describe patient-perceived barriers to genetic counseling and testing among people at high risk for hereditary cancers as defined by nationally accepted criteria.

Methods

Following University of Minnesota Institutional Review Board approval, attendees of the 2019 Minnesota State Fair were asked to take a short web-based survey at the University of Minnesota's Driven to Discover (D2D) Research Building. Questions included participant demographics, experience with healthcare providers, and personal and family history of cancer. Individuals meeting criteria for cancer genetic counseling (GC) referral were identified by

branching logic and prompted to answer additional questions about their history of GC referral and uptake. Demographic and clinical measures were summarized using mean (SD), range, frequencies, and percentages, and compared between relevant groups using t- and Chi-square tests. Statistical significance was set at $p < 0.05$.

Results

Some 1,594 fairgoers participated, and 673 (42%) met GC referral criteria. Of this group, 184 (27%) knew their high-risk (HR) status. Participants were more likely to know their status if they identified a provider as "their doctor" (83.6% vs 75.4%, $p = .023$) or had discussed family history with their provider (94.5% vs 82.4%, $p < .001$). All 91 HR participants (13.6%) referred to GC underwent genetic testing, but only 49 (52%) completed the GC referral. The most common reasons HR participants cited for not receiving GC referral were a doctor not telling them they were at high risk (294 HR participants, 43.7%) or a doctor not taking a family history (56 HR participants, 8.3%).

Conclusions

In this large survey study, most participants at high risk for hereditary cancers were unaware of their status and eligibility for cancer genetic screening. Contrary to published evidence that physicians and genetic counselors consider patients generally uninterested in genetic screening, our findings highlight the key role physicians play in ensuring high-risk patients have appropriate access to genetic services including counseling, testing, and treatment. Improved family history collection and patient awareness of hereditary cancers, in addition to accessible physician education on genetic referral guidelines in locations where genetic counselors are available, are all viable strategies to aid in the identification and referral of high-risk individuals. **MM**

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Purple urine bag syndrome in a skilled nursing facility during the COVID-19 pandemic

BY NATE GIPE AND SUSAN LAABS, MD

Purple urine bag syndrome (PUBS) is a rare syndrome associated with chronic urinary catheterization.^{1,2,3} It is caused by red and blue pigments produced by bacterial enzymes depositing on the synthetic material of the urine collecting bag, resulting in purple discoloration of the bag, but not the urine itself.^{4,5} PUBS is underdiagnosed and, while often benign, can cause distress in patients and healthcare providers unfamiliar with the syndrome. It can be indicative of underlying urinary tract infection (UTI).^{1,6,7,8} We report a case of PUBS in a skilled nursing facility (SNF) during the COVID-19 pandemic.

Case report

A 76-year-old male SNF resident with a history of residual cognitive impairment following traumatic brain injury, bronchiectasis, and chronic Foley catheterization for urinary retention was found to have purple discoloration of his urine collecting bag (Figure 1). The patient denied symptoms suggestive of UTI. His temperature and vital signs were normal. Urinalysis showed 5-10 white blood cells (WBCs)/hpf, trace bacteria, positive nitrates, and moderately elevated leukocyte esterase. A diagnosis of asymptomatic bacteriuria was made. His catheter was changed, and purple discoloration of the urinary collecting system recurred. After discussion with the patient, he chose monitoring with a plan to treat only if he developed symptoms of infection. He remained asymptomatic until 6 weeks later, when he was found febrile and unresponsive. He was found to have supraventricular tachycardia with aberrancy; synchronized cardioversion was performed. He was transported to the Emergency Department where laboratory data was notable for urinalysis showing 50-100 WBCs/hpf and bacteriuria. His urine was orange and cloudy. WBC count was elevated at $10.4 \times 10^3/\mu\text{L}$, his lactate was 8 and venous blood gas

showed primary respiratory acidosis with secondary metabolic acidosis with partial compensation. Blood cultures were positive for *Enterococcus faecalis* and *Pseudomonas aeruginosa*. The patient was treated with ceftriaxone and vancomycin, and intravenous fluids, and his urinary catheter was changed. He returned to his baseline state of health and PUBS resolved.

Discussion

PUBS pathogenesis begins in the intestine, where gut microbiota metabolizes tryptophan to indole. Indole is converted to the red pigment indirubin and the blue pigment indigo by bacteria in the urinary tract.^{1,5} These pigments precipitate on the polyvinyl chloride of urine bags and cause purple discoloration.⁹ Common bacterial species associated with PUBS are *E. coli*, *Morganella morganii*, *Pseudomonas aeruginosa*, *Enterococcus*, *Proteus*, and *Klebsiella*.^{2,3} Risk factors for PUBS include female sex, advanced age, chronic catheterization, immobilization, institutionalization, dementia, constipation, recurrent UTIs, and alkaline urine.^{5,6,7,10} There are no accepted guidelines for treating PUBS and the literature is conflicting as to whether it definitively indicates the presence of urinary tract infection, but general recommendations include patient counseling, catheter replacement, improving catheter hygiene, and consideration of antibiotics.^{9,11,12} The use of antibiotics in asymptomatic cases is controversial as some fear it may needlessly contribute to antibacterial resistance.^{9,13} While often benign, PUBS has been reported to progress to Fournier's gangrene or urosepsis.^{5,9,11,14} It is important for physicians to be aware of PUBS so that they can make a timely diagnosis and implement monitoring and treatment. **MM**

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Subacute combined degeneration secondary to nitrous oxide abuse

BY MARK GORMLEY III

Vitamin B12 (cobalamin) plays an important role in various biochemical pathways, including hematopoiesis and oligodendrocyte growth.¹ Deficiency can lead to subacute combined degeneration (SCD) of the spinal cord, a condition due to multifocal demyelination, particularly affecting the dorsal columns and lateral corticospinal tracts.^{2,3} B12 deficiency can occur from dietary causes, pernicious anemia, and malabsorptive conditions, but may also be seen in nitrous oxide abuse. We report a case of SCD in a previously healthy young man due to nitrous oxide abuse.

Case report

A 32-year-old previously healthy man presented with bilateral lower-extremity numbness and weakness as well as numbness in his bilateral fingertips. The patient reported chronic injury-related joint pain and had used marijuana, Kratom, and “whippits” (nitrous oxide) for pain control. He had no previous medical or surgical history, was on no medications, and had no family history of neuromuscular disease.

On physical exam, he demonstrated full muscle strength throughout upper and lower extremities, except for 4+/5 on dorsiflexion and plantar flexion bilaterally. Sensation to light touch and vibration was diminished in his bilateral lower extremities starting at the mid-shin and worse distally. Pinprick sensation was intact throughout. Sensation of bilateral upper extremities was normal except for diminished light touch sensation in distal fingers bilaterally. Proprioceptive sense was absent in bilateral great toes. He had diffuse hyperreflexia and an extensor response (positive Babinski test). His gait was spastic and wide-based.

Further data revealed a normal basic metabolic panel, creatine kinase, liver functions tests, and a negative urine drug

screen. Complete blood count showed a normocytic anemia with a hemoglobin of 9.1 g/dL and MCV of 96 fL. B12 was low at 170 ng/L, and homocysteine and MMA were elevated at 99 μ mol/L and 5.2 μ mol/L, respectively. Peripheral smear showed hypersegmented neutrophils. No imaging was obtained.

Discussion

Our patient’s presentation is consistent with SCD due to B12 deficiency. Etiology of B12 deficiency can be broadly distributed into three categories: poor intake, malabsorption, and dysfunction.³ B12 dysfunction is the rarest of these three categories, but it is often related to heavy nitrous oxide (N₂O) use, as in our patient who was using high doses of whippits daily for three months.

N₂O oxidizes cobalamin’s essential co-factor, cobalt, rendering it non-functional.⁴ N₂O-related SCD typically develops in those with heavy whippit use, but it has been documented rarely after one-time nitrous oxide anesthesia as well.⁵

Diagnosis of SCD includes clinical signs of dorsal column and lateral corticospinal involvement. Absolute B12 deficiency may or may not be present in patients with N₂O use, as this causes a functional deficiency, and high homocysteine and MMA levels support the diagnosis.^{6,7} Spinal MRI is not necessary for diagnosis, but imaging may reveal T2-weighted hyperintensity in the posterior cord.⁸ In our patient’s case, the history of nitrous oxide abuse along with exam findings and low serum B12 confirmed the diagnosis without need for imaging.

Partial recovery is most common in patients with SCD, but full recovery is often seen when B12 replacement is initiated promptly.⁹ It can take months to years for maximal recovery, and this process requires the support of a multidisciplinary team. Our patient was started on intra-

muscular B12 injections and discharged to a rehab facility for ongoing physical therapy and support for nitrous oxide abuse.

Conclusion

Subacute combined degeneration of the spinal cord is a multifocal myelopathy related to B12 deficiency that typically affects the dorsal columns and lateral corticospinal tracts. It often presents in those with malnutrition or malabsorptive disorders, but should be considered in patients with sensory deficits and a history of nitrous oxide abuse. **MM**

Mark Gormley III is a fourth-year student at the University of Minnesota Medical School.

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Fear of racism during COVID-19: A patient survey before and after the murder of George Floyd in Minneapolis

BY LAUREN MCPHERSON, MD, MAT; BECKY FORD, PHD; MARIA VERONICA SVETAZ, MD, MPH, FSAHM, FAFP; AND KATHERINE VICKERY, MD, MSC

Introduction

As the COVID-19 pandemic has progressed in the United States, the effects of structural racism have been amplified.^{1,2} Minnesota has some of the most significant racial disparities nationally.^{1,3,4} While the pandemic was disproportionately affecting local marginalized communities, the Minneapolis Police murder of George Floyd created a pivotal moment, further exposing how racism hurts and kills and galvanizing movements to push for change.¹

We use data from a 2020 survey⁵ to assess whether primary care patients in Minneapolis' largest safety net healthcare system avoided going out in public during the COVID-19 pandemic due to the fear of racism/discrimination, if this increased after the murder of George Floyd, and if increases differed by race.

Methods

We conducted a cross-sectional phone survey for operational quality improvement purposes.⁵ Trained staff collected surveys May 11–June 12, 2020. George Floyd was murdered on May 25, 2020, and data collection paused May 28–June 1, 2020.

Survey administrators attempted to contact 909 patients and reached 397 willing participants (43.6% response rate). We included 322 participants whose race/ethnicity/language subgroup had sufficient data before and after George Floyd's murder in our analyses.

Demographic information was pulled from Electronic Health Records, which is self-reported upon registration. We used binary logistic regression to predict fear of going out due to racism/discrimination by patient race/ethnicity/language (Latinx, Black, White) and time point (pre/post George Floyd murder).

Results

Across timepoints, Latinx respondents had the highest levels of fear of racism/discrimi-

nation (52.4%) compared to Black (35.6%) and White (8.2%) respondents. Across all groups, fear of racism/discrimination increased 14.2 percentage points (PP) after George Floyd's murder ($p=.003$). However, interaction effects showed only Black respondents experienced a significant increase in the fear of racism/discrimination after the murder of George Floyd (from 17.0% to 46.8%, 29.8 PP, $p < 0.001$) (Figure 1).

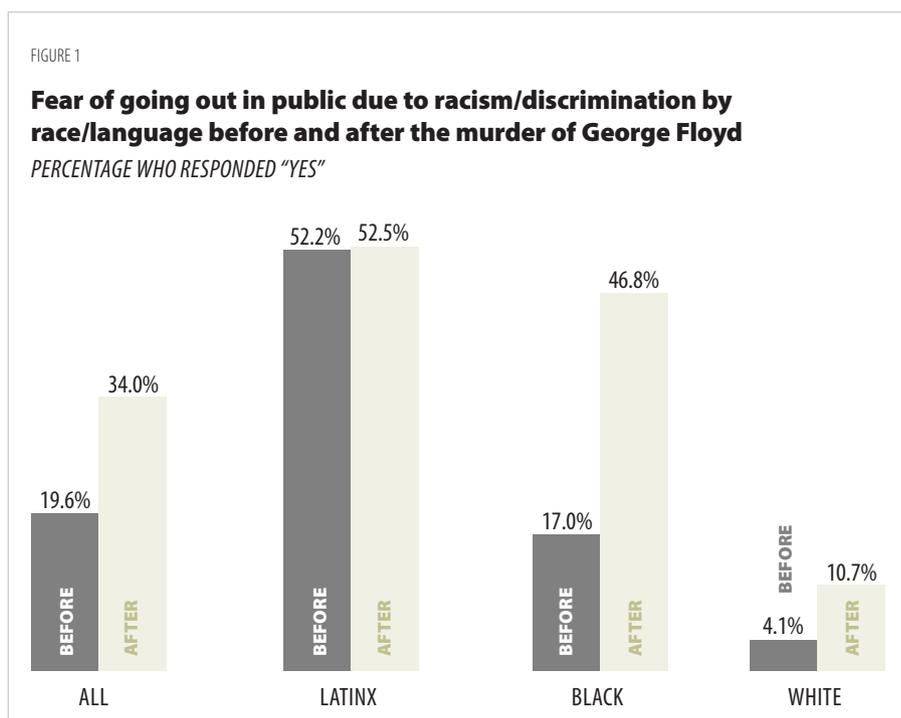
Discussion

Our survey data shows a significant increase in the fear of going out due to racism/discrimination among Black respondents after George Floyd's murder and constant high levels among Latinx respondents at both timepoints.

Limitations of our study include respondent reporting bias, sample bias due to need for stable phone access, and small sample sizes for certain subgroups. We recognize the racial/ethnic groupings do not fully respect the unique diversity of cultural heritages found in our community.

The United States is currently experiencing two pandemics: COVID-19 and racism. Since this survey, multiple local and national events have compounded the trauma focused in communities of color, including the trial of Derek Chauvin, multiple police shootings, and hate crimes, emphasizing the urgent need to address racism and discrimination. Given our results and the well-documented negative impacts of racism on physical and psychological health,¹⁻³ there is an immediate need to help our patients access basic needs when fear of racism and discrimination prevent them from going out in public. Clinicians must address racism, discrimination, and other determinants of health; educate themselves about structural racism and discrimination; and advocate for our patients to improve the systems of healthcare.^{1,2} MM

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Leptospirosis: a case of sudden multi-organ failure in a previously healthy male

BY SIMISOLA ODUSANYA, BS, AND MICHELLE KIHARA, BA

A 49-year-old male with no past medical history, presented from outside-hospital (OSH) in septic shock and multi-organ failure. The patient's wife reported that seven days prior to his presentation, he developed a headache, diffuse muscle aches, and a fever of 102° F. The next day, he developed shortness of breath, hemoptysis, diarrhea, nausea, vomiting, conjunctival suffusion, and decreased urine output. The lab values at the OSH were significant for elevated inflammatory markers and elevated creatinine. His social history was significant for hobby farming. He was started on ceftriaxone and azithromycin and an emergent bronchoscopy performed for persistent hemoptysis showed diffuse alveolar damage. His respiratory status worsened, which prompted intubation and the start of Continuous Renal Replacement Therapy (CRRT) for acute kidney injury, and he was airlifted to our tertiary care hospital. When our team saw him, the physical exam was significant for profound jaundice, scleral icterus, and diffuse crackles, with vital signs notable for hypotension, tachycardia, oxygen saturation of 82%, and fever of 102° F. Additionally, the inflammatory markers were elevated: ESR 38, CRP 328.4, and lactate 3.9. The initial laboratory evaluation revealed the following: ALT 200, AST 500, anemia (Hgb 9), thrombocytopenia

(platelets 18K), leukocytosis (WBC-29K), elevated D-dimer, creatinine 5, CK 10K, and INR 1.26. The chest x-ray showed diffuse interstitial opacities and bilateral effusions, and the cardiac ECHO showed LVEF of 35-40%, and diffuse hypokinesis. The antibiotics were broadened to vancomycin, fluconazole, doxycycline, and zosyn, and the patient was started on pressors for distributive shock.

Diagnosis and treatment

A comprehensive infectious workup was negative, including serology for anaplasma, hepatitis B and C, leptospira, aspergillus, babesia, hantavirus, rickettsia, and negative urine antigens for legionella, histoplasma, coccidioides and blastomyces. Further investigation with Karius assay returned positive for *Leptospira Interrogans*. Patient's clinical condition improved 10 days after admission, and he was transferred from the SICU to the medical floor. CRRT was stopped and he was started on hemodialysis. The patient had significant improvement in his kidney and liver function tests and was discharged with continuation on outpatient dialysis until complete renal recovery.

Discussion

Ninety percent of cases of leptospirosis are mild and self-limited or subclinical; 10%

can develop into severe forms, as seen in this patient. The illness generally presents with the abrupt onset of fever, rigors, myalgias, and headache in 75-100% of patients. Conjunctival suffusion is an important but frequently overlooked sign, occurring in about 55% of patients. This case illustrates the importance of physical exam findings in evaluation of a clinical presentation. Conjunctival suffusion is not a common finding in other infectious diseases; its presence in a patient with a nonspecific febrile illness should raise the possibility of leptospirosis. This case highlights the importance of obtaining a thorough patient history and considering a broad differential when working up a complex clinical presentation that includes acute decompensation, multiple organ failure, and suspected infectious etiology. **MM**

Simisola "Simi" Odusanya, BS, and Michelle Kihara, BA, are both fourth-year students, University of Minnesota Medical School.

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Clinical and histopathological features of lipoblastoma

BY SANJNA RAJPUT; SAAD ALSUBAIE, MD; KULDEEP SINGH, DO; TONY C-T HUANG, MBBS; AND STEVEN MORAN, MD

Lipoblastoma is a rare benign tumor of infancy and childhood. It has similar radiographic imaging findings as malignant liposarcoma. Therefore, it is crucial to distinguish between the two through other diagnostic methods and clinical features.

Methods

Patients with lipoblastoma who were treated at our institution over a 25-year period were identified. A retrospective review of their medical charts was conducted to analyze their clinical characteristics and outcomes.

Results

There were 14 males and 6 females (ratio 2.3). Age at diagnosis ranged from 6 months to 44 years. Sixteen patients were Caucasian, one was Hispanic, one was African American, two were race undetermined. Imaging included ultrasound (N=6), MRI (N=14), X-ray (N=9), and CT (N=4). Location reported in lower extremity (N=8), upper extremity (N=5), trunk (N=2), head/neck (N=2), inguinal region (N=1). Size ranged

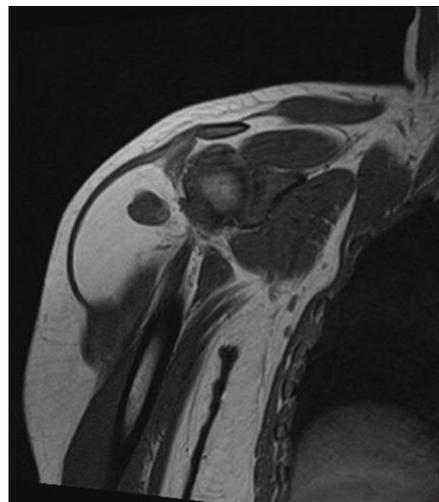


Figure 1: Coronal MRI of the right shoulder indicating intramuscular mass lesion within the deltoid. Mass demonstrates homogeneous macroscopic fat signal with a nodular component along the medial aspect, seen as hypointensity in T1.

TABLE 1

Summary of demographic findings (n=20)

PATIENT DEMOGRAPHICS	N (%)
SEX: Male	14 (70)
SEX: Female	6 (30)
AGE AT DIAGNOSIS (YEARS)	
<1	2 (10)
1-9	13 (65)
10-20	3 (15)
>20	2 (10)
Mean	8 years
Median	4.5 years
RACE: Caucasian	16 (80)
RACE: Hispanic	1 (5)
RACE: African-American	1 (5)
RACE: Unknown	2 (10)
IMAGING	
MRI	14 (70)
Ultrasound	6 (30)
X-Ray	9 (45)
CT	4 (20)
3 modalities	6 (30)
2 modalities	6 (30)
1 modality	3 (15)
No modality	5 (25)
Diagnosis on Imaging	0 (0)

TABLE 2

Clinical presentation (n=20)

CLINICAL PRESENTATION	N (%)
DIAMETER (CM)	
Range	1.6-18
Mean	6.1
Median	4.9
PRESENTATION	
Mass	19 (95)
Nodule	1 (5)
Focal	17 (85)
Diffuse	3 (15)
OTHER STRUCTURES INVOLVED	
Superficial	5 (25)
Deep	15 (75)
Nervous only	5 (25)
Muscular only	6 (30)
Osseous only	2 (10)
Osseous and muscular	2 (10)

TABLE 3

Pathologic and chromosomal analysis

PATHOLOGIC AND CHROMOSOMAL ANALYSIS	N (%)
PATHOLOGY	N=11
Lobulated	5 (45.4)
Well-circumscribed	3 (27.3)
Encapsulated	4 (36.4)
Yellow-white	4 (36.4)
HISTOLOGY	N=4
Mature adipocytes and fibrous septa	3 (75)
Focal myxoid changes	2 (50)
Spindle cells	2 (50)
IMMUNOHISTOCHEMISTRY	N=20
CD34+	2 (10)
Desmin+	1 (5)
Not reported	17 (85)
CHROMOSOMAL ANALYSIS	N=20
Chromosome 8 abnormalities	6 (30)
Translocation of 8q11-q13	4 (20)
Structural abnormality	1 (5)
Deletion of portion of 8q	1 (5)
Nonspecific structural abnormalities	2 (10)
Normal karyotype	4 (20)
Not reported	8 (40)

TABLE 4

Follow-up (n=20)

FOLLOW-UP	N (%)
Recurrence	1 (5)
No recurrence	15 (75)
Unknown	2 (10)
FOLLOW-UP IMAGING	7 (35)
MRI	5 (25)
CT	1 (5)
X-Ray	1 (5)
Range	2 weeks - 24 years
Mean	31.6 months
POST-OPERATIVE COMPLICATIONS	
Suture granuloma	2 (10)
Gluteal Atrophy	1 (5)
None	17 (85)

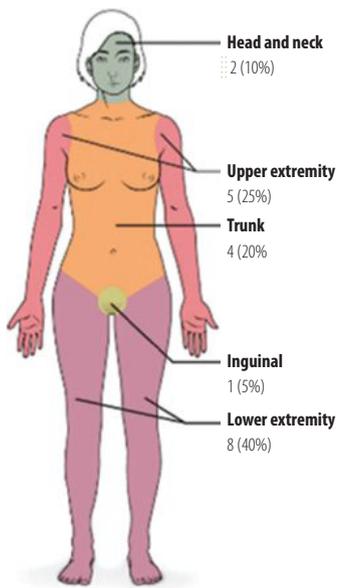


Figure 2: Anatomical site distribution - 13 cases in the extremities (65%), 4 in the trunk (20%), 2 in the head and neck region (10%) and 1 in the inguinal region (5%).

from 1.6 to 18 cm (mean of 6.1). Seventeen were focal and 3 diffuse. Lesions involved deeper structures in 15 patients and superficial structures in five. All patients underwent complete resection. Available pathology reports noted 5 lobulated, 3 well-circumscribed, 2 encapsulated, 1 thinly-encapsulated masses featuring mature adipocytes, fibrous septa (n=2), focal myxoid changes (n=2) and spindle cells (n=2). Twelve patients underwent chromosomal analysis, observing six chromosome 8 abnormalities and two nonspecific structural abnormalities. One recurrence reported. Seven patients had follow-up imaging and 18 patients had follow-up visits between 2 weeks to 24 years.

Conclusion

Lipoblastoma is an uncommon childhood neoplasm of embryonic white fat that can also

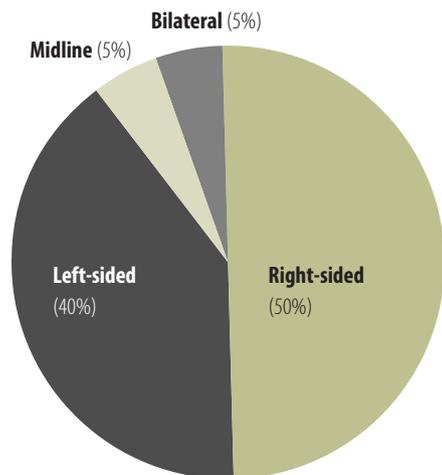


Figure 3: Affected side distribution- lesions presented as right-sided (n=10), left-sided (n=8), midline (n=1), and bilateral (n=1)

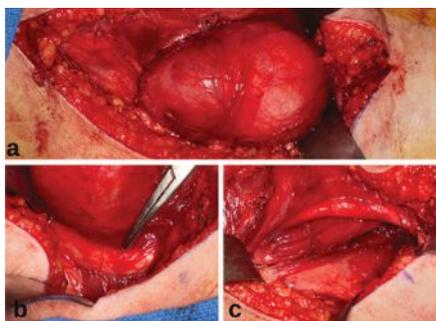


Figure 4: Intraoperative appearance of lipoblastoma mass (a), infiltrating deeper muscular structure i.e. long head of biceps femoris (b, c)

present in adolescence and adulthood. Age should be avoided as diagnostic benchmark. It has a male and Caucasian predilection. Imaging, especially MRI, is helpful but ineffective in determining definite diagnosis. This is established via histopathologic and cytogenic reports. Recurrence is higher with diffuse form. Total resection has favorable prognosis



Figure 5: Gross appearance of lipoblastoma. Tumor is well-circumscribed mass with a yellow-white, myxoid appearance. Fibrous septations demarcate lobules of mature adipose tissue.

with negligible functional impact, minimal complications and smooth follow-up. **MM**

Sanjna Rajput is a third-year student, Mayo Clinic Alix School of Medicine. Saad Alsubaie, MD, is a plastic surgeon. Kuldeep Singh, DO, is a resident in plastic and reconstructive surgery. Tony C-T Huang, MBBS, is a resident in plastic surgeon. Steven Moran, MD, is chair, Division of Plastic Surgery and Reconstructive Surgery. All are with Mayo Clinic.

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JANNA R. GEWIRTZ O'BRIEN, MD, MPH

- Assistant professor, Division of General Pediatrics and Adolescent Health, University of Minnesota; adolescent medicine physician, Adolescent and Young Adult Health, Department of Pediatrics, Hennepin Healthcare.
- MMA member since 2013.
- From Dix Hills, NY. University of Rochester in New York for undergraduate and medical school. Residency in pediatrics at Mayo Clinic, Rochester, MN. MPH at University of Minnesota Executive Program in Public Health, Administration and Policy. Fellowship in adolescent medicine, Leadership Education in Adolescent Health Interdisciplinary Fellowship, University of Minnesota.
- Lives in Southwest Minneapolis. Married to a fellow physician, raising a "spirited" 5-1/2-year-old daughter and a wild 8-month-old puppy.

Became a physician because ...

What drove me into healthcare was a passion for addressing the social drivers of health inside and outside the clinical setting, through advocacy and community-based work. Now, my clinical work, research and advocacy are deeply interconnected and focus on how primary care and community-based health services can most effectively and equitably serve youth from historically marginalized communities, particularly youth experiencing homelessness. As an adolescent medicine physician at Hennepin Healthcare, an assistant professor at the University leading community-based research and a shelter-based healthcare provider at The Bridge for Youth, I truly feel I am living my dream job.



Greatest challenge facing medicine today ...

The immense pressure physicians face to accomplish an increasing amount in shorter periods of time. So much of my work relies on interpersonal connections and long-term relationships with patients

that take time and patience to forge. Pressures related to time, documentation and getting through our own agendas as healthcare providers for every visit have the potential to perpetuate harm, inequities and oppression at the hands of the healthcare system.

Favorite fictional physician ...

Dr. Elliott Reid from *Scrubs*. Not only is she fantastic and wicked smart, she normalizes the insecurities that come with a career in medicine, from training through transition to faculty.

If I weren't a physician ...

I would be a high school teacher. The thing I love most about being an adolescent medicine physician is working with young people. I learn from them every day and am continually inspired by their intelligence, humor and remarkable resilience. Adolescents are at a critical moment of development and I love being a part of their journeys. work in school-based healthcare, I have seen the pivotal role that high school teachers play in young people's lives.

PETER ARGENTA, MD

- Associate professor, Department of Obstetrics, Gynecology and Women's Health, Division of Gynecologic Oncology, University of Minnesota; and gynecologic oncologist with M Health Fairview University of Minnesota Hospital and Masonic Cancer Center.
- MMA member since 2002.
- Grew up in Ann Arbor and Detroit, MI; attended the University of Michigan. Medical school at Duke University, research fellowship in fetal wound healing at UCSF, residency in obstetrics and gynecology at University of Pennsylvania and fellowship in gynecologic oncology at Mount Sinai Hospital in New York City. Six-month sabbatical with Plastic Surgery Unit at the Royal Infirmary in Glasgow, Scotland.
- Married to wife Oufreez for 26 years. Daughter Maya is a junior engineer at the University of Iowa (they are a Big Ten family) and son Dominic is a high school junior with aspirations toward medicine



Greatest challenge facing medicine today ...

The greatest challenge facing medicine today is distraction. There are so many nonsense distractions, things that help not the patient, physician, hospital or insurance companies, but siphon time and energy from the important missions. Strangely, many of the measures meant to alleviate this obstruction have made it worse. No doc will tell you they are their happiest when typing.

Favorite fictional physician ...

No question, that would be Benjamin Franklin "Hawkeye" Pierce from *MASH*. He is equal parts competence, resilience and humanity, with a dash of Groucho Marx. His moral compass is sound (mostly), and gives him clarity of mission in chaos. Humor is an essential part of my dealing with the complexity and common sadness of cancer care. Cancer is a reminder we are not permanent, but humor is a reminder that we're still in the game.

If I weren't a physician ...

If I weren't a physician, I am truly not sure what I would do. I have no artistic ability of any sort, which is doubly sad because I have a great appreciation for art and music; I am fascinated by business, but would be a terrible salesman; and I am far too old, too slow and too small to play hockey for the Red Wings (my childhood aspiration).

Became a physician because ...

My father is a surgeon and my mother was a social worker who also was a wartime nurse, so in part it is a family tradition. I also love problem-solving, which in oncology we have in spades. But I think the driver for me has always been that there is room to make a historic impact, a change in the field that keeps on working for people even after you are gone. I haven't done that yet, so it's back to work for me.

Lori Swanson

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- ✓ government investigations
- ✓ Medical Assistance regulations
- ✓ medical ethics

HealthLeaders magazine named Ms. Swanson one of 20 Americans making a difference in health care. *LawyersUSA* named her one of the top ten attorneys in America. Alan Greenspan appointed her to the Federal Reserve Board's Consumer Advisory Council in 2004, which she was elevated to chair in 2006.



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