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MINNESOTA MEDICINE

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HEALTH EQUITY IN MINNESOTA

STUDIES, INITIATIVES, EFFORTS ...
AND STILL FAR TO GO

PAGE 12

Minnesota Medical Association

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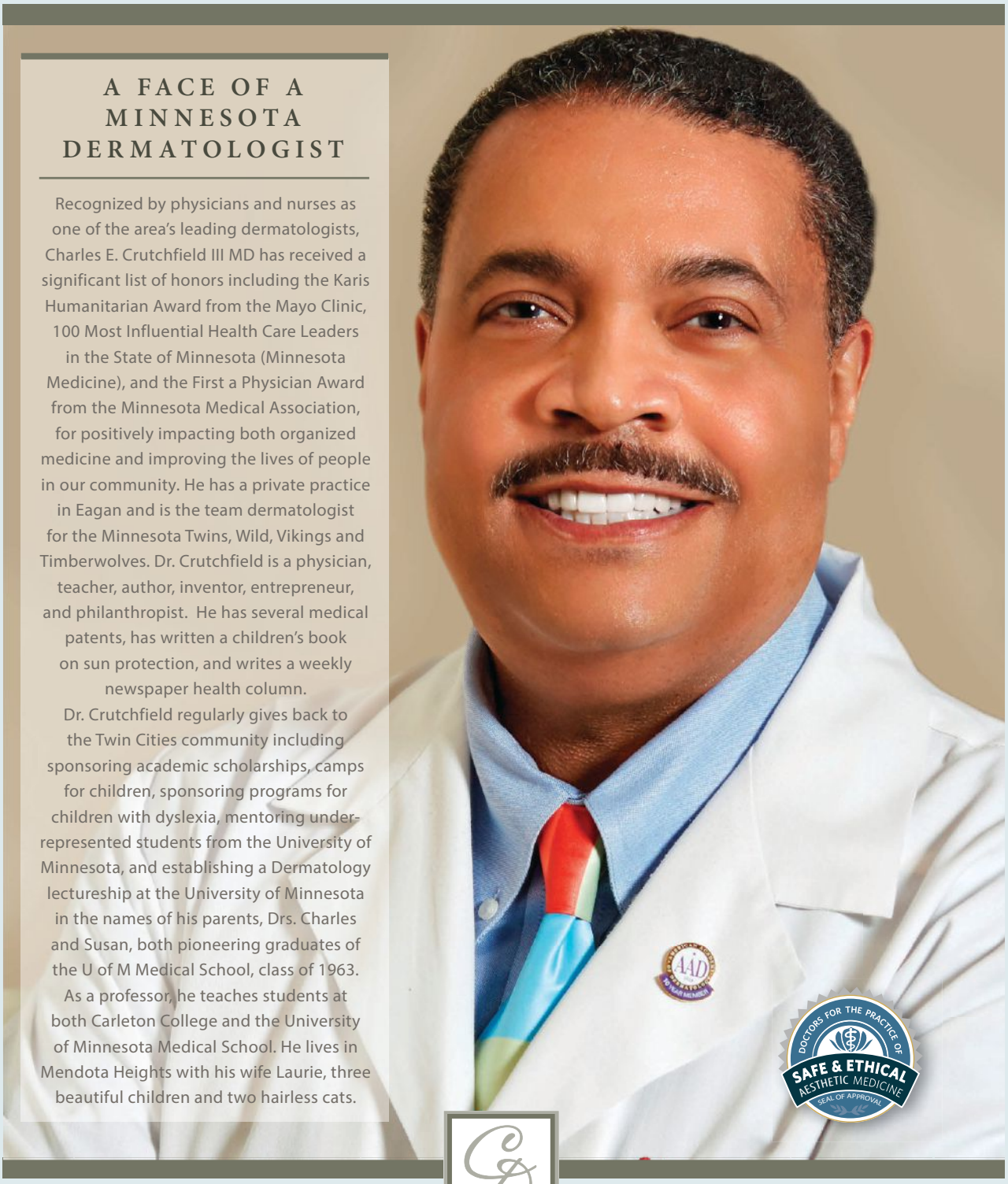

A FACE OF A MINNESOTA DERMATOLOGIST

Recognized by physicians and nurses as one of the area's leading dermatologists, Charles E. Crutchfield III MD has received a significant list of honors including the Karis Humanitarian Award from the Mayo Clinic, 100 Most Influential Health Care Leaders in the State of Minnesota (Minnesota Medicine), and the First a Physician Award from the Minnesota Medical Association, for positively impacting both organized medicine and improving the lives of people in our community. He has a private practice in Eagan and is the team dermatologist for the Minnesota Twins, Wild, Vikings and Timberwolves. Dr. Crutchfield is a physician, teacher, author, inventor, entrepreneur, and philanthropist. He has several medical patents, has written a children's book on sun protection, and writes a weekly newspaper health column.

Dr. Crutchfield regularly gives back to the Twin Cities community including sponsoring academic scholarships, camps for children, sponsoring programs for children with dyslexia, mentoring under-represented students from the University of Minnesota, and establishing a Dermatology lectureship at the University of Minnesota in the names of his parents, Drs. Charles and Susan, both pioneering graduates of the U of M Medical School, class of 1963.

As a professor, he teaches students at both Carleton College and the University of Minnesota Medical School. He lives in Mendota Heights with his wife Laurie, three beautiful children and two hairless cats.

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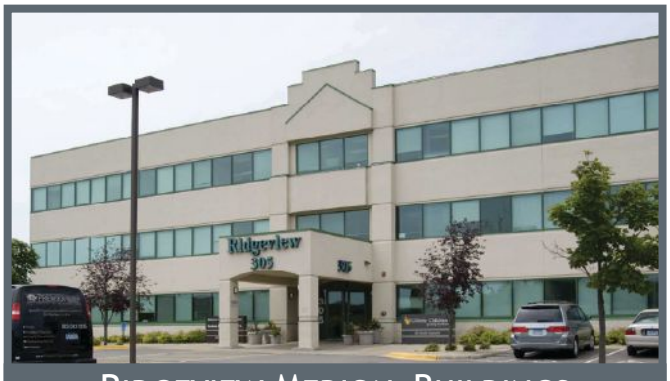

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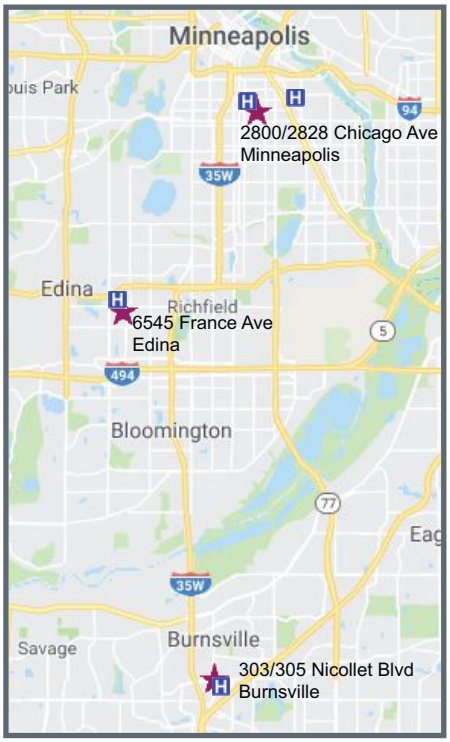

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CONTENTS

Jan/Feb 2020 | VOLUME 103 | ISSUE 1

IN THIS ISSUE

There is no lack of effort in addressing health disparities in Minnesota, but most involved in the effort say that systemic change—and not just in health care—must be made. Minnesota Medicine *looks at the issues and the people who devote themselves to change efforts, starting on page 12.*

PHOTO BY RICH RYAN PHOTOGRAPHY

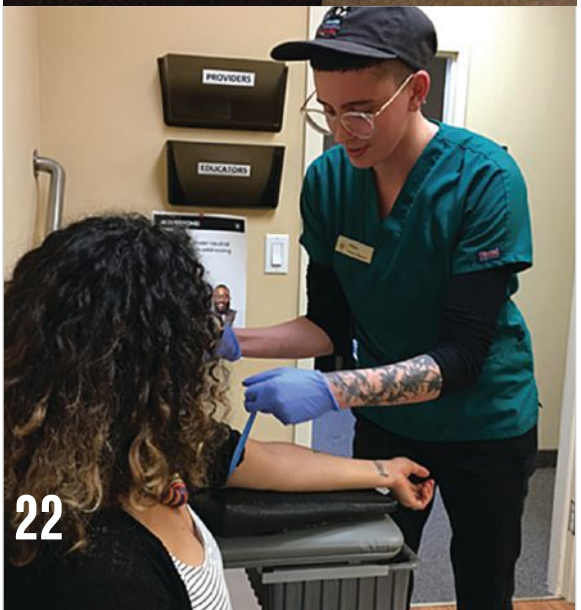
FEATURES

ON THE COVER

HEALTH EQUITY IN MINNESOTA

Clinical AND Health Affairs

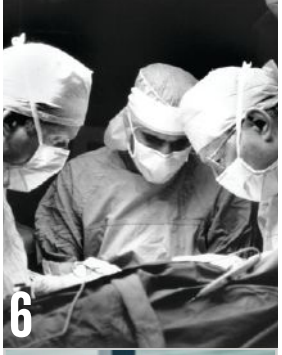
Student, Resident AND Fellow Research

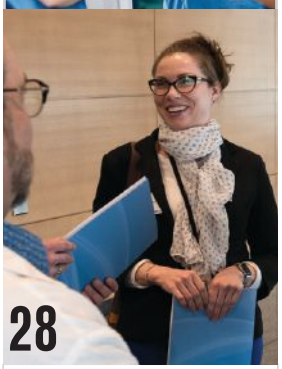


DEPARTMENTS

COMMENTARY

ON CALL





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Zeke J. McKinney, MD, MHI, MPH

The anxiety of underrepresentation

There were very few African American men in medical school at the University of Minnesota when I was a student. In one way, I felt extremely fortunate to have the opportunity to be in training as a physician; in other ways, this conveyed a large sense of responsibility to advocate for patients like myself. But in the context of the immense power differential between faculty physicians and students, knowing when and how to speak up is difficult.

One of the most challenging instances during my time as a medical student occurred when an attending was describing to a group of students a heartfelt interaction with a patient's family, saying that the patient's daughters had come from the South to visit, and that they were always beautifully dressed when they came to see their father, wearing formal attire and large, colorful hats. I was shocked when she said, "You could call them 'Southern belles,' but they weren't the right color." I still regret not explaining to her how that statement was not only a poor misrepresentation of reality (there are Southern belles of all colors), but also, more importantly, conveyed a large degree of cultural assumptions to students in a way that could impact their ability to interact with such families in the future.

Not saying anything might have been the correct action at the time; I received negative feedback soon after when other students complained to faculty about my "preaching" because I had talked to them (without any faculty present) about the privilege of being educated (and primarily white) medical students when they expressed frustrations at patients not taking their medications appropriately or not wanting to quit smoking.

I continue to experience this same cognitive dissonance of action versus inaction; I want to move these conversations with fellow physicians forward, but at the same time, I don't want to jeopardize my own role as a colleague. Patients of color and other underrepresented populations have shared similar anxiety about advocating for themselves and at the same time fearing they might upset the treating physician and their care. If these kinds of conversations are difficult for me, someone who himself works in health care, can we expect to rely on patients to speak up when the barriers to these discussions may be much greater?

Patients of color have shared similar anxiety about advocating for themselves and at the same time fearing they might upset the treating physician and their care.

There is plenty we can do regularly, starting with making sure we are asking patients, particularly those who may be underrepresented amongst clinicians, whether they feel all their concerns have been met, and giving time and space for such a conversation to happen. If we see a patient (or student) as "difficult," we can ask ourselves whether there may be a cultural or privilege gap that affects our understanding of their experience—and whether even describing them in this way to the health care team is advancing what we are trying to achieve.

We cannot forget that everyone is an individual and that we physicians are generally in a position of power. We must do our best to make space, especially for those who have been underserved, for our patients to teach us how to do better. It's just another part of our lifelong learning as a physician. **MM**

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

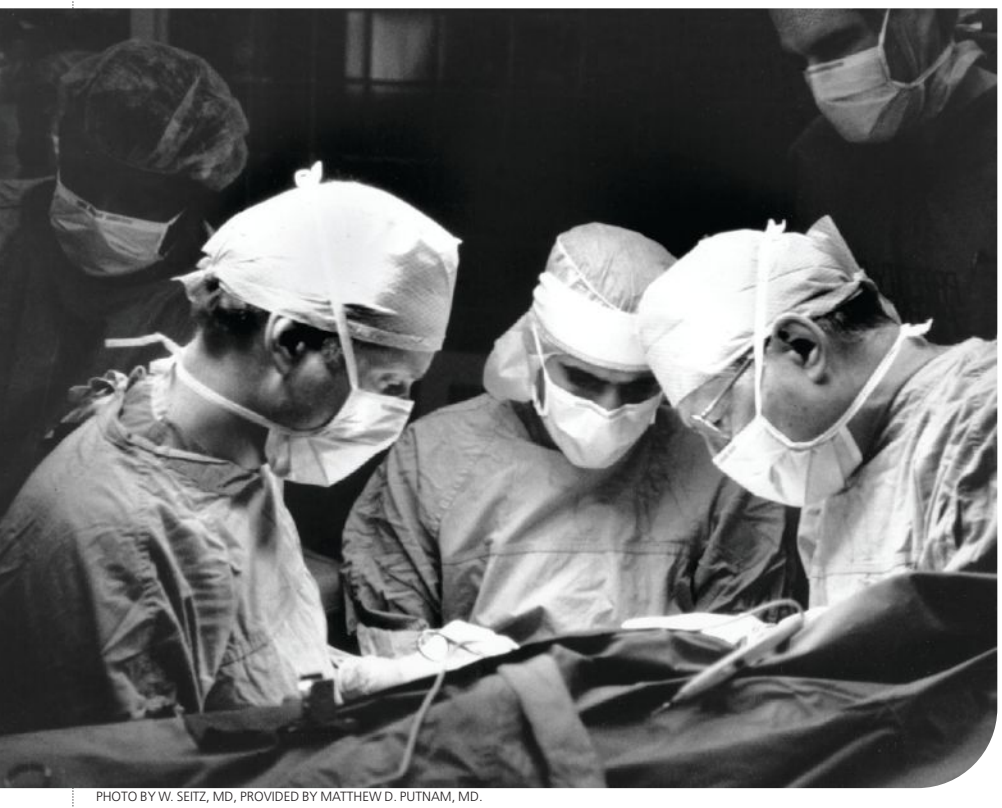

PHOTO BY W. SEITZ, MD, PROVIDED BY MATTHEW D. PUTNAM, MD.

Mentee and mentor operating at Columbia Presbyterian, New York. Matthew D. Putnam, MD, is on the right in the foreground.

Learning from mentors … and the reverse

BY MATTHEW D. PUTNAM, MD

My first "semi-good" paper led to my mentor who guided me over four years as I built a computer model of learning.

At the start, this idea was at least a "stretch goal" and the situation for which mentors are made. We can't control the arrival of our hare-brained ideas; assigned mentors may come to us too early or too late. We are each responsible to know when we need mentoring.

Wikipedia presents a broad picture of mentorship. The number of styles and goals presented is beyond what I've found useful in medicine. But within that description are four qualities I've found to be important: mentorship is informal (not forced), usually face-to-face, sustained and providing the mentee with greater relevant knowledge.

Here's what I believe about mentoring:

- Every teacher is not your mentor. This is a function of time available or personality or both. That we are not mentored by all of our teachers is a good thing. We may not enjoy them as much as we need the grade.
- Great bosses are not simultaneously mentors. Roby C. Thompson, MD, (former chair of Orthopaedics at the University of Minnesota) was the fairest and most visionary boss I ever had. But he had many commitments beyond me, so he was not my mentor in the sense I mean.
- Mentors need not be older. A colleague of any age can be a mentor, particularly in these technology-driven times, but a colleague is not necessarily a mentor. I'm appreciative of my co-researchers Joan Bechtold, PhD, and Ann VanHeest, MD. But they didn't mentor me—nor did I mentor them.
- Although life coaches have become common, they work for you and will be financially conflicted when telling you what you need to hear. They are not mentors.
- Mentors should not ask you out to discuss your progress. They are not your romantic partners, best friends or confidants.
- Mentors should challenge you to the point of making you uncomfortable.
- Mentors must be more expert than you in the subject to be learned.

We all need mentors

It's worth noting that even smart and famous people needed mentors. Einstein was mentored by Max Talmey beginning at age 15. Kareem Abdul Jabbar and Bill Walton both credited John Wooden as the key mentor in their lives. Had Wooden been simply a great basketball coach at UCLA, I doubt this would have been true, but his teaching was more about life than basketball.

In Homer's *Odyssey*, Telemachus is guided by Mentor. That Mentor was—when not possessed by Athena, the God-

dess of Wisdom—a mostly ineffective older man seems not the point except in so far as we associate age with experience and the need for the mentor to pass on wisdom to us in times of need. What goes unsaid in the Odyssey is that not only must the mentor be available—the mentee must listen.

I was given the opportunity many times to become a better listener but, being open and honest, I admit that the U.S. Army improved my listening more than any other experiences or teachers. The Army teaches how to use the Johari Window, helping one to become more authentic to others and oneself. This quality of knowing and revealing yourself is seriously studied in business today as part of being emotionally intelligent, which turns out to be as important as IQ. When you combine authenticity with listening, you are in position to benefit from a mentor.

A mentor does … what exactly?

What does a mentor actually do? Vineet Chopra, MD, and Sanjay Saint, MD, MPH, answer this question in a 2017 issue of *Harvard Business Review*. Although their article can apply to many fields, they were focused on medicine. My assessment of their findings is:

- Choose mentees and mentors carefully. Neither party benefits from lack of commitment. Unless both are fully engaged, they are wasting their time.
- Both mentors and mentees have work to do. If the mentee is to gain from being teamed with a mentor, the mentor needs to work too.
- Trainee and mentee meetings should be frequent and on time. Goals must be set and monitored. A method to reschedule meetings must be established. Frequent rescheduling indicates a need to reconsider the relationship.
- Head off disagreements or resolve them quickly. If this is not possible, terminate the mentor-to-mentee relationship and maintain a professional relationship.
- Don't treat or expect to be treated as an employee. Mentoring is not the same as having an apprentice. A mentee should never accept having their mentor take credit for the mentee's work. Similarly, do not be mentored into becoming the mentor's doppelganger—that is not the point. The mentor is supposed to help the mentee find their apex—not to become the mentor's mirror.
- If you ask to be mentored, you must prepare to do the same for another in the future. I've attempted to mentor others; I hope I met many of their needs—but I have no illusion that I met them all.

When you combine authenticity with listening, you are in position to benefit from a mentor.

Learning and commitment

I set out in college to build a machine model of learning. The chance I could have completed this work without my mentor is zero. Research related to adult learning tries to determine the best way to teach and re-prepare for any activity—even flying and surgery. Research I co-initiated in orthopedics at the University of Minnesota demonstrated that surgery case volume alone did not an expert make. Maybe this should be disheartening, but I don't think so.

Anders Ericsson, whose research Malcolm Gladwell cites in formulating his famous 10,000-hours rule in his book *Outliers*, shows that time or repetition alone does not result in improved performance. Ericsson believes that without "deliberate practice," i.e. doing what is hard for you and measuring your success, you have no hope of improvement. This is where your mentor comes in: helping you to measure your work and then reset and/or aim as needed.

Mentors may give you a wise saying to remember. My key surgical mentor, Robert E. Carroll, MD, told those he mentored: "Good, better, best; never let them rest, 'til your good is better and your better best." Pithy, but true. Carroll stressed the need to find something more than money by which to measure success. He remained involved in each of his mentee's work throughout his entire lifetime—almost to the day of his passing.

The results of mentoring

We can never know the future, we can only hope. For some, the idea of hope likely sounds foolish. Not active enough. Not a sure thing. Good or bad, that is often how mentoring is, especially as we age. The mentor cannot be sure of being there at the moment of success. No one has ever captured this sort of hope for me better than Vaclav Havel. He wrote: "Hope is definitely not the same as optimism. It's not the conviction that something will turn out well, but the certainty that something makes sense, regardless of how it turns out."

Each of your patients (students) who comes before you will mentor you. I admit to having been so taken with the concept of the doctor as teacher that I did not hear my patients teaching me at the beginning of my career. Fortunately, I finally caught on. I truly started to love and learn from my practice when I heard my patients speak.

That true mentors are uncommon is an understatement. If you are open to learning and assessment, you may have a few in your lifetime. Immerse yourself in each such experience. **MM**

Adapted from a Grand Rounds lecture delivered August 30, 2017 at the Minneapolis Veteran's Hospital

Matthew D. Putnam, MD, is franchise medical director-trauma for Depuy Synthes, colonel in the U.S. Army Reserves and staff orthopaedist at the VA Medical Center, Minneapolis.

Creating success for junior faculty

Mentors make an important difference

BY KATHLEEN WATSON, MD, AND WILLIAM N. ROBINER, PHD

Mentoring in academic medicine promotes faculty development, engagement and retention, but the focus has predominantly been on mentoring of researchers. Clinician educators are less likely to have research mentors, be familiar with promotion guidelines and have protected time. Their career aspirations and values may not fully accord with performance expectations of promotion committees. As appreciation of mentoring in promoting academic internists' professional development has grown, institutions increasingly recognize the importance of developing mentoring programs.

Pairing new faculty with senior faculty mentors creates opportunities for learning and professional growth, but mentees may have difficulty capitalizing on mentoring, and both mentors and mentees may lack realistic expectations or competencies providing or accepting mentoring. Junior faculty may be disappointed in mentors' guidance if they feel overly challenged or ineffectively supported. Conversely, senior faculty may feel inadequately prepared to guide junior colleagues.

To better understand the impact, characteristics and diversity of mentors and patterns of mentoring of junior general internal medicine (GIM) faculty in progressing towards success and academic promotion, we used both semi-structured interviews and an online survey with nine successful GIM faculty at the University of Minnesota. "Success" was defined as either having been promoted to associate professor during the previous year or having been selected through a competitive process for a major academic leadership role. The group included four women and five men who had graduated from medical school seven to 29 years ago.

Findings

The nine participants said they had received varying amounts of mentoring during their careers; none felt they had received too much mentoring. Relatively minimal mentoring was obtained during medical school and residency. Two would have liked more mentoring during their first or current job. Two fellowship graduates reported receiving about the right amount of mentoring during fellowship.

Only two reported being very satisfied with mentoring during medical school. Five reported being somewhat or very satisfied with mentoring during residency. Greater satisfaction was evident in their current or first jobs' mentoring relative to during training.

All mentees considered their mentoring a critical catalyst to achieving professional milestones (e.g., promotion or leadership appointments). Rather than having single mentors, all reported benefitting from having developed networks of mentors. Four mentees retained mentors from residency or fellowship upon joining the faculty. Eight had at least two mentors by their fourth faculty year; only two had fewer than six mentors.

All participants said mastery of clinical care was central to their values and sense of professional identity and academic success. Eight had been chief residents or fellows, citing that experience as an incubation period for their academic focus. Four had attained additional graduate degrees before becoming faculty: two MEd, one MPH and one PhD.

Mentors were described as pivotal in shaping junior faculty focus. All described mentors' coaching as helpful in refining their focus (e.g., through feedback on manuscripts or grant proposals and providing leadership and career advice). Participants described mentors as encouraging and modeling passion for teaching, resilience, adaptability, initiative, and gratitude; and for seeking fulfillment by creating legacy in preparing future physicians. Six reported mentors facilitated participation in national professional organizations.

Mentoring roles

When asked to describe how mentors helped at key career junctures, all had found mentors whom they considered to be role models or who introduced them to key professionals in the field. Eight described mentors who provided content or methodological expertise. Seven reported mentors who encouraged them to revise and finish manuscripts. Seven described mentors as their advocates or work coaches. Mentors helped faculty prioritize their time commitments: three described mentors who coached them to "say no" (e.g., to non-central activities) and to take risks. Three described at least one of their mentors serving as a life coach.

Junior faculty can benefit from proactively seeking, securing and negotiating the mentoring they need, rather than being passive recipients of mentoring.

When promoting mentees' professional development as clinicians, mentors were perceived as being either moderate or strong role models. In terms of promoting professional development as educators, mentors were perceived as playing either moderate or strong roles as collaborators. Mentors' roles in professional development as researchers revealed greater value in providing content and methodological expertise, and as problem solvers and role models.

A somewhat different pattern emerged when participants rated mentors' roles in promoting participant's work life integration than in their roles in promoting professional development across the four professional activities. Here, mentors were seen as being most helpful in serving as champions or advocates, collaborators or supervisors, with relatively lesser roles as role models or connectors.

Coping with obstacles

All mentees faced significant obstacles or failure early in their careers, reflecting the presumably universal experience of encountering professional hurdles. The most common self-perceived failure cited by five faculty was the rejection of a first paper or grant. Others were not chosen for desired leadership positions or did not complete an advanced degree. Eight recalled their mentors' advice in these situations as crucial. Mentors reportedly provided advice and a "reality check" on the likelihood of having a manuscript or grant accepted the first time, and disclosed their own disappointments. Mentors re-inspired their mentees by critiquing manuscripts and grants, facilitating research networking, offering encouragement, and providing feedback on leadership effectiveness. Participants recalled incorporating mentors' lessons, values (e.g., fairness, tenacity, focus) and behaviors (e.g., taking initiative to seek critiques on writing, developing broad academic networks), explicitly into their professional repertoire. They also learned to curb perfectionism, set realistic expectations, and be more patient.

Reflections

The participants unanimously believed being a good clinician was essential to their self-concept and to their academic success. Working as clinician educators induced them to ask challenging questions, develop expertise and establish credibility with peers. They uniformly recognized the need to discover their "passion" and translate it into specific academic projects.

Junior faculty recalled their mentors' advice to take initiative to acquire more than one mentor—to find the "mentoring you need when you need it," stifle reticence about approaching potential mentors, build a network of mentors and to seek collaborators across departments, institutions and disciplines. They recommended developing reputations as being serious and reliable by giving talks, volunteering for academic activities (e.g., research, quality improvement projects, committees), finishing work on time, being collaborative, and thoughtfully negotiating the parameters of their involvement on projects.

Participants offered practical wisdom to junior colleagues: set deadlines, write down and commit to personal goals, block out writing time every week, block out wellness time every week, and meet regularly and often with mentors. They further advised finding "coattails" on projects where they could make contributions

How mentors helped

(9 junior faculty interviewed)

Served as professional role model	**9**
Introduced them to key professionals in the field	**9**
Provided content for methodologic expertise	**8**
Encouraged them to revise and finish manuscripts	**7**
Served as advocates, career coaches or "cheerleaders"	**7**
Coached mentee about life, eg. personal and family guidance	**3**
Coached mentee to take risks	**3**
Coached mentee to "say no"	**3**

while learning leadership skills. Finally, they noted the importance of staying resilient by taking vacations without guilt, taking breaks after long periods of intense work, staying connected with families and friends; focusing on their own well-being to sustain core values, and developing their network of colleagues.

Discussion

Faculty uniformly credited early mentors with helping them to discern their specific academic foci, open doors to professional networks and provide key advice on careers and manuscripts, while serving as clinical role models. This is consistent with a previous study of medical school faculty that found role modeling by mentors to significantly influence production of academic publications. Interviewees uniformly pointed to mentors who helped them overcome challenges or failures. All were eager to share with junior faculty the value of mentoring and to pass on the knowledge and career-enhancing strategies they had adopted.

Although new GIM faculty are generally enthusiastic about embarking on careers, they can feel unprepared for the professional trajectory of becoming academically successful, can flounder committing to foci, and may struggle to find the resources they need to thrive. Mentoring is a vehicle for facilitating early career academic internists' professional development. This group's experience suggests that junior faculty can benefit from proactively seeking, securing and negotiating the mentoring they need, rather than being passive recipients of mentoring—or lacking mentoring altogether.

Rather than fearing that they are imposing on mentors, junior faculty should be encouraged to approach mentoring as a resource and value-added benefit to their positions. Mentoring facilitates individual accomplishment and enhances the productivity and social culture of academic divisions. **MM**

Kathleen Watson, MD, and William N. Robiner, PhD, are faculty at the University of Minnesota Medical School.

Advice for junior faculty/ strategies for satisfying careers in general internal medicine

- First, be a good clinician.
- Focus on learning and perfecting clinical knowledge and skills.
- Look for unanswered clinical questions.
- Stay clinically active: it gives you credibility, purpose, and is something to fall back on.
- Find your passion.
- Find a focus.
- Be open to new opportunities: take risks.
- Find several mentors.
- Seek different mentors for what you need when you need it.
- Don't be shy, most faculty value being mentors.
- Find a mentor early: don't work in a vacuum.
- Build a network.
- Find "your people," locally and nationally.
- Volunteer: make yourself known as serious and reliable.
- Never have lunch alone.
- Seek collaborators across departments, institutions, and disciplines.
- Find coattails on projects, papers, grants.
- Be strategic.
- Set deadlines for yourself.
- Write down your goals.
- Block out time for writing every week.
- Block out time for wellness every week.
- Meet regularly and often with mentors.
- Learn to say NO.
- Work hard.
- Do your work and establish a local reputation.
- Always finish your work.
- Recharge.
- Take your vacations.
- Take breaks.
- Sustain your core values.

Minnesota Medical Association

MMA POLICY FORUM

A Physician's Take: Minnesota and the Public Health Insurance Option

Join the MMA for an engaging policy forum on Feb. 13 at which attendees will have the opportunity to learn more about various state-level public option proposals, discuss the impact a public option would have on physicians in Minnesota, and help shape MMA policy.

Thursday, Feb. 13, 2020

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

FOR MORE INFORMATION, VISIT www.mnmed.org/PublicOption

Cynthia Woods, DO, medical director of the nonprofit Open Cities Health Center, which finds a way to see patients who may not be able to pay, or to pay much.

PHOTO BY RICH RYAN PHOTOGRAPHY

HEALTH EQUITY IN MINNESOTA

STUDIES, INITIATIVES, EFFORTS ... AND STILL FAR TO GO

BY LINDA PICONE

Minnesota's health statistics are, overall, good.

Life expectancy is, according to 2017 data from the Institute for Health Metrics and Evaluation, just shy of 81 years—only those in Hawaii, Puerto Rico and California live longer, and the national average is 78.6 years. We have the lowest death rate from heart disease in the nation, according to the National Center for Health Statistics. We have, especially in the state's major urban areas, excellent health care organizations.

But the average numbers, ranging from good to excellent in most health assessments, don't tell the full story. And if you have heard anything about health equity at all, you've likely heard something like this:

Minnesota is one of the healthiest states in the nation, but it has some of the greatest inequities between whites and people of color.

It also has some of the largest gaps in the nation between whites and people of color for homeownership, educational achievement and employment. All of these things are related to each other—and they are related to race and racism, individual but, more important, structural.

How and why

"Racial disparities are at the core of Minnesota's overall health disparities" says Ed Ehlinger, MD, MSPH, "Statistically, the black population is better off here (in Minnesota, compared to Mississippi), but the white population is *much* healthier, which leads to greater disparities. If we are going to be the healthiest state possible, the disparities themselves are the important thing to address."

For life expectancy, Ehlinger says, both whites and African Americans who are 65 years old can expect to live about another 20 years. "But a healthy life expectancy is much lower for African Americans. African American life expectancy in Minnesota may be the longest in the country, in fact, but it's those little nuances that tell the story."

Ehlinger has spent essentially all of his professional life focused on health inequities. Former Minnesota commissioner of health, he currently is acting chair of the Federal Health and Human Services Secretary's Advisory Committee on Infant Mortality.

Health care is only a part of the equation, and not even the major part, he says. "Medical care is 10 to 20 percent of the determinants of health; 40 to 70 percent is living conditions." And social and economic policies over the decades, if not centuries, have led to disparities in health as well as housing, education and employment. Among them, Ehlinger notes:

- When Ehlinger moved to Minnesota in 1980, there were few homeless people, but when Ronald Reagan became president and cut housing assistance, public health funding and other social supports, the numbers began to grow.
- The redlining housing policies of the 1930s, '40s and '50s, keeping people of color out of neighborhoods—often out of homeownership altogether—led to housing inequities.
- The Indian Relocation Act of 1956 was an effort to move Native Americans from reservations into urban areas, which impacted their behavior relative to chemicals and violence.

"Our work has to be changing both public and private policies that impact living conditions," Ehlinger says.

Efforts to reduce inequities

There has been no shortage of efforts to reduce health inequities in Minnesota, especially over the past two decades. Broad initiatives and studies have included:

- Eliminating Health Disparities Initiative (EHDI), established in 2001 by the Minnesota Legislature. Initially, it funded primary health promotion and direct services; today it includes efforts to address root causes.
- Since 2012, the statewide assessment by the Minnesota Department of Health (MDH) has shifted its focus from disease rates and clinical measures to the conditions all Minnesotans need to be healthy. This was a departure from traditional health assessments, not just in Minnesota but nationally.
- Establishment of the Center for Health Equity (CHE) as part of MDH in 2013. CHE helps connect, strengthen and amplify efforts on health equity both in MDH and across the state. Its work includes everything from offering training to examining the nearly $325 million in grants MDH distributes each year through an equity lens. CHE makes grants to help build capacity for organizations to develop leaders in equity work.
- MDH's Healthy Minnesota 2022 Statewide Health Improvement Framework focuses on advancing health equity by improving conditions that create health. The vision—"all people in Minnesota enjoy healthy lives and healthy communities"—has three priorities: 1. The opportunity to be healthy is available everywhere and for everyone. 2. Places and systems are designed for health and well-being. 3. All can participate in decisions that shape health and well-being.

HEALTH EQUITY MEANS ACHIEVING THE CONDITIONS IN WHICH **ALL PEOPLE** HAVE THE OPPORTUNITY TO ATTAIN THEIR HIGHEST POSSIBLE LEVEL OF HEALTH.

—from "The Role of Health Care in Eliminating Health Inequities in Minnesota" draft report

Bruce Kou Thao, MS, MA, director of CHE since 2017, is optimistic about the potential for reducing inequities, but also realistic about how much effort it will take across agencies, organizations and governments that do not always work collaboratively.

For one thing, state funding to MDH's Eliminating Health Disparities Initiative to address inequities for communities of color and American Indians in Minnesota has not changed in nearly 20 years, Thao says, although this population has grown significantly and additional health issues have been added.

For another, it is unrealistic and inappropriate to expect a handful of grantees across the state to transform population health outcomes, Thao says. "Rather, it takes all entities which impact health to recognize their role in either advancing

health equity or perpetuating inequities. This includes government, health care, non-profit organizations, schools and many others that make up the health equity ecosystem." He says CHE is putting together a 2020 report that will share lessons learned and promising practices and outcomes from EHDI grantees so efforts can build on what seems to be working. The report will also expand on the concept of a health equity ecosystem and what it takes for it to thrive.

Thao believes health inequities can be reduced, although the effort has been and will be intensive. "In Minnesota, there are so many people who are passionate not just about health equity but about humanity," he says. "Beyond passion, it will take intentional, coordinated action and sustained investment in community solutions if we ever want to achieve health equity."

Looking at the big picture

United States of Care, a nonprofit organization started in 2018, is currently involved in five states—including Minnesota—to develop policies "to ensure that every single American has access to quality, affordable health care regardless of health status, social need or income.

In Minnesota, United States of Care brought together a group that included representatives of health care organizations, insurance companies, nonprofit organizations, state agencies and more (including the Minnesota Medical Association) to begin to plot a way to eliminate health inequities over the next 10 years. United States of Care commissioned a six-month feasibility study by Wilder Research and Wilder Center for Communities.

The study and report, still in draft form at the time of publication of this issue of *Minnesota Medicine*, examined the data about health inequities in Minnesota and also looked at efforts, large and small, to reduce those inequities.

"It isn't that there's a void of things happening," says Melanie Ferris, MPH, research manager for Wilder Research, "there's a ton of things happening." The researchers looked at the challenges those working towards health equity face.

"What are the changes within health care systems that can transform how health care is delivered?" she says. "That's the big to-be-determined part. This sets a vision for what can be done differently."

The vision is a big one, involving not only health care institutions and practitioners but all of the other factors that impact health—housing, education, employment. Physicians can make a difference in those areas, even if it seems far outside of their day-to-day work or the main activities of their organizations. "Health care has a seat at many, many tables," Ferris says. "How do we leverage that to reduce inequities?"

The report, "The Role of Health Care in Eliminating Health Inequities in Minnesota," now goes back to the group that commissioned it, Ferris says, to look at what productive starting points for action and change might be—and to determine where the energy is to make changes. The "ask" is not a small one. To make measurable progress in reducing health inequities, the report sets out these necessary activities:

- Demonstrating leadership to address inequities through resource allocation, transparency and commitment.
- Understanding and working to dismantle structures, policies and practices that uphold inequities.
- Adopting practices that support whole person care, including dimensions of culture, language, sexual orientation/gender identity and socioeconomic status.

PHOTO BY RICH RYAN PHOTOGRAPHY

2017 INFANT MORTALITY RATES

	NUMBER	RATE (PER 1,000 LIVE BIRTHS)
MASSACHUSETTS	262	3.7
BLACK OR AFRICAN AMERICAN	58	5.8
NON-HISPANIC WHITE	121	2.9
MINNESOTA	328	4.8
BLACK OR AFRICAN AMERICAN	82	8.9
NON-HISPANIC WHITE	171	3.6
MISSISSIPPI	322	8.6
BLACK OR AFRICAN AMERICAN	189	11.2
NON-HISPANIC WHITE	118	6.3

DATA SOURCE: CENTERS FOR DISEASE CONTROL AND PREVENTION, NATIONAL CENTER FOR HEALTH STATISTICS

Infant mortality rates are an indicator of health inequities. Although Minnesota's overall rate of 4.8 (in 2017) is considered good, the disparity between infant mortality for non-Hispanic whites and for black or African Americans is even greater than it is in Mississippi, a state with one of the highest rates of infant mortality. And even in Massachusetts, with the lowest rate of infant mortality, the rate for blacks is twice as high as for whites.

- Diversifying its workforce and strengthening a culture of diversity, equity and inclusion. Sharing power with communities to set direction and make decisions.
- Focusing on advancing equity by addressing social determinants of health, in collaboration with community partners.
- Optimizing or developing financial mechanisms to incentivize the elimination of health inequities.

In practical terms, these might involve everything from raising the salaries of health care employees to creating payment models that incentivize wellness. (The report will be available at wilderresearch.org.)

What physicians can do

Looking at the big picture can be overwhelming to physicians who care about health equity but are just trying to do their best for their patients every day, keep up with electronic medical records and satisfy the productivity goals of their group.

But everyone can make a difference. Not without some effort, but with changes that are simple and meaningful.

"Where individual physicians and smaller groups can really drive change is in their own institutions; they can make improvements within their own practice and within their institution," says Ferris. "Smaller changes can drive energy for broader things."

Physicians can look at the policies at the clinic or hospitals where they work and see if they create inequities without realizing it. "Look at who you hire, the hours you're open, the kind of transportation available to your patients," says Ehlinger. Check to see if the rules your organization has for making appointments exclude some people, says Ferris.

Thao says to think in terms of a sense of belonging. "Opportunity, belonging and nature is a more accessible way to talk about determinants of health. If an individual or group feels that they don't belong, then why would they value their health?"

Physicians should ask themselves what they are saying to their patients—likely inadvertently—about whether they belong in the clinic or hospital. "It's even down to the pictures they hang on the wall or who greets them when they walk through the door," Thao says.

He shares a conversation he had with a white physician with a large number of Somali patients. The physician learned how to say just one word in Somali: "Hello." "Just learning one word shelped some of his patients feel as if he cared about them—that they were welcomed in his clinic," says Thao.

Connecting with the community is essential, Ferris says. "Community members—patients—must drive the work in reducing inequities. It can't be done in a vacuum. How are practices, agencies and institutions connecting with their communities?"

Physicians can and should be part of the community themselves, Ehlinger says. "Are you involved in your school board, your PTA, your local soccer club?" he asks. "Get engaged, just be a compassionate human being. Physicians have a huge voice in their community. If they bring an equity lens to their community activities, it can make a difference." **MM**

Linda Picone is editor of *Minnesota Medicine*.

THE MINNESOTA MEDICAL ASSOCIATION AND HEALTH EQUITY

Improving health equity in Minnesota is one of the MMA's top priorities. The MMA continues to raise awareness of the health disparities faced by Minnesota's minority communities and in bringing the medical community together to achieve health in Minnesota.

In 2019, The MMA hosted several educational forums on health equity with partners that included the Minnesota Chapter of the American Academy of Pediatrics, the Minnesota Academy of Family Physicians, Minnesota Doctors for Health Equity and Simpson Housing. More are planned for 2020.

The MMA began and continues to explore what is needed to increase the number of black males in medicine. The number of black males applying and matriculating to medical school has declined to very low levels, an alarming 40-year trend.

The MMA is also a partner in the United States of Care feasibility study, to be released early this year, on broad systemic changes to achieve health equity in Minnesota.

CARE FOR ALL

MINNESOTA ORGANIZATIONS ADVOCATING FOR HEALTH EQUITY

BY ANDY STEINER

Minnesota consistently achieves top national rankings for health care quality, but a deeper look at the numbers reveals that health care access and quality for many marginalized segments of the state's population is actually lower than it is in other parts of the nation.

A number of crusading nonprofits, some in existence for decades, others for a handful of years, have dedicated themselves to changing that reality. We talked to key leaders from six to find out how they work toward health equity for all.

OPEN CITIES HEALTH CENTER

When he was in medical school, Ritesh Patel, MD, dreamed of one day finding a way that he could equitably spread health care costs out between insured patients who could afford high-end care and patients who couldn't afford even basic care because they were under- or uninsured.

"I firmly believe that health care can be affordable and there's a much better way to do it," Patel says. "What I was envisioning was a process through which it's possible to bill insurance companies or patients for high-end services and manage care for patients who can't afford care."

Last year, when Patel became CEO of Open Cities Health Center, a community-based clinic founded in 1967 in St. Paul's Rondo neighborhood with a goal of providing quality care to economically disadvantaged residents, he was one step closer to realizing his dream.

The nonprofit clinic, which offers care to all on a sliding-fee basis no matter what the patient's insurance status, provides a range of services, including medical, dental, behavioral health, chiropractic and eye care. Long expanded from its beginnings in the basement of St. James AME Church, Open Cities now has two loca-

tions in St. Paul, one on Dunlap Street, and one on Rice Street, in the city's North End neighborhood.

Patel believes that Open Cities' funding approach, which spreads proceeds from excess insurance payments across multiple patients, provides an answer to issues of health equity faced by many people in the United States.

"It is an elegant solution, where we cater to any and every patient whether they can or can't pay," he explains. "We bill insurance for every insured person who comes into our clinic." Because the clinic is a nonprofit, he continues, "Whatever money we make off that we are able to stretch out to one, two, even four patients."

After a few years of difficulty, Open Cities is once again in growth mode, with the goal of serving 10,000 patients in 2020.

"What has been helping us is a generational switch in thinking where people are more interested in being socially equitable," Patel says. "Instead of going to a for-profit clinic, patients with insurance coverage choose to go to us because they know their dollars will help other patients."

What are the biggest health-equity issues faced by your patients?

"Health is just one component of somebody's life: There's also employment, housing, food, training and education. If everything is humming along and working in synchronicity, all of those components come together, but some of our patients don't have housing, some don't have a job, some don't have an education or training. They don't have the same chance for success that everyone else does, and because of that, many suffer from chronic health issues. Add to that a lack of health insurance or access to affordable care, and you have a recipe for struggle."

How does Open Cities address those issues?

"We stretch our dollars so we can serve everyone who comes in our door, which is still uncommon in this day and age. If patient at a private practice clinic doesn't pay, the provider will refuse service until they *can* pay. We don't refuse any service. We keep letting patients make appointments. Because we spread out the money, we keep providing whatever care they need."

THE LADDER

Renée Crichlow, MD, is a success, but she doesn't like to focus on that fact. When she talks to young people about how she came to be an assistant professor at the University of Minnesota's Department of Family Medicine and Community Health, she instead likes to emphasize the meandering path she took to get there.

"Kids will hear stories about me, and they think I'm this big, esteemed doctor, but I want them to know that I went to three colleges before I graduated," Crichlow says. "I didn't start med school until I was 27 years old. It wasn't a straight shot. Now I'm a professor at one of the finest med schools in the world."

Crichlow likes to tell her story as a way of illustrating, especially for kids who come from families without easy access to career role models, just how she got to where she is now. If she can do it, so can they.

In 2012, Crichlow and a group of her colleagues at University of Minnesota Physicians Broadway Family Medicine Clinic decided they wanted to create a mentorship organization that introduced young people from low-wealth communities to careers in health care.

Most club members are recruited from the clinic. "Every kid who comes in for an appointment gets asked, 'What do you want to be when you grow up?'" Crichlow says. "If they say anything about health care, we invite them to come to our meetings."

Crichlow and her colleagues named the club The Ladder, with the idea that volunteer leaders, all health care professionals, would mentor members by telling them about their jobs and clearly explaining how they got there. Providing support for young people is central to the mission of increasing equity for participants, and the motto, "Lift as you climb. Build as you grow," explains how all participants play a key role in the volunteer-run organization.

Club meetings build on this theme, Crichlow says: "At the beginning of every meeting, we line up everyone," mentors and mentees alike, "from the youngest to the oldest. We form a ladder. Participants can see where they'll be in three years. They'll see how people move up the ladder. It becomes a community of purpose."

How does The Ladder address health equity?

"One of the largest impacts we can have on the health of our participants is encouraging on-time graduation. On-time high school graduation adds 10 years to a person's life expectancy. No medications exist that can do something like that. That's why this organization is so important."

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THE LADDER *(continued from previous page)*

Are you having a positive impact on participants?
The Ladder has caught on in other communities. There are now chapters at United Hospital in St. Paul, the University of Wisconsin-Madison and in California and Ohio. As The Ladder's founder and CEO, Crichlow is happy that her vision is spreading.

"It's a good thing," she says. "One of my friends said that going to one of our meeting is like going to the gym. It takes time. You don't always want to go. But afterwards, you feel so good."

PHILLIPS NEIGHBORHOOD CLINIC

In 2003, when Phillips Neighborhood Clinic (PNC) was founded by the late John Song, MD, assistant professor of medicine and bioethics at the University of Minnesota, the

FAMILY TREE CLINIC

Nearly 50 years ago, when Family Tree Clinic was founded, one of the key health-equity issues faced by its clients was limited access to reproductive health care.

While reproductive health remains front and center at Family Tree, changing societal attitudes and innovation in birth control technology means that the nonprofit has had to shift its mission to remain relevant. Most recently, this translated into Family Tree expanding its services to meet the unique health-equity needs of the region's LGBTQ population.

"We've always been responsive to the community's needs and to those most marginalized community members," says Nathalie Crowley, Family Tree associate executive director. "Starting in in the '70s, when reproductive sexual health was extremely limited, and then in the '80s and '90s, by doing things like HIV testing and working with more male-identified folks. In the 2000s, we began to realize that there was a need for expanded sexual health services for LGBTQ patients."

Offering high-quality care focused on the needs of the LGBTQ community is a health equity issue, Crowley says.

"Gay, lesbian, bisexual, transgender, queer folks have faced huge amounts of discrimination within the medical system. They've been denied care, faced discrimination and harassment and even violence and assault in medical settings."

As Family Tree became known as a clinic that welcomed LGBTQ patients, staff began to hear about the struggles that transgender people faced when seeking gender-affirming hormone therapy. While hormone therapy was available in some Minnesota clinics, it was administered under stringent requirements. Seeing this as a health-equity issue, Family Tree administrators decided to take a different approach.

"Once we started looking at hormone care within our community, we decided we are going to use an informed-consent model, which is how medicine is practiced in other cases, and provide trans people gender-affirming hormone care without all of those requirements," Crowley says. "As long as the hormones aren't going to cause major health issues and you understand the risks and benefits, we will provide hormones to whoever asks for it. It fits with our mission. "

What are the key health equity issues faced by your clientele?
"Finding really competent and compassionate medical providers who really acknowledge people as whole beings, rather than just based on their sexual orientation, gender identity or racial identity—and feeling safe in that environment."

What's needed to increase health equity for everyone?
"Some sort of universal health care so that everyone has insurance and can go to the doctor without worrying about getting a huge bill. That would be a huge step toward addressing most health-equity issues."

vision was that it would be a small neighborhood clinic offering limited medical services for residents of the Phillips neighborhood. Services would be provided by University of Minnesota medical students, giving them a chance to hone their skills — and an opportunity to help others.

"Dr. Song wanted to help the students of the medical school find opportunities to work with patients who are uninsured or underinsured and have fallen through the cracks of the healthcare system," says Phuong Le, a fourth-year pharmacy student at the University of Minnesota's College of Pharmacy and PNC's communications chair.

The original vision only involved medical students, but it didn't take long for things to shift, when leaders from other health care and social service programs at the University decided to get their students involved.

"Now we are working with a number of schools," Le says, "including the School of Dentistry, the School of Healthcare Administration, Medical Lab Sciences; Nursing — both BA and MA, pharmacy, physical therapy, public health and public health nutrition, the School of Social Work and audiology. We are currently in the process of introducing occupational therapy to our clinic. And we also have law volunteers."

The clinic, located in St. Paul's Lutheran Church, is open Monday and Thursday evenings, 6–9pm. Students focused on particular specialties, including ophthalmology, audiology, dentistry and podiatry, volunteer on monthly specialty nights. Because PNC's mission is to provide care for uninsured people, no money or proof of insurance is required for treatment.

Like all those who staff and run PNC, Le is a volunteer. The clinic, which treated 890 patients in 2018, relies on a team of some 400 volunteers, including a team of preceptors, licensed health care professionals (also volunteers) who ensure that students are making appropriate decisions in caring for patients.

Running a program with volunteers requires, Le says, "serious commitment," but he's found that most of the volunteers who work at PNC share his commitment to providing quality medical care for people who would otherwise fall through the cracks.

"I understand the kind of struggles our patients experience because I also came from a lower-socioeconomic background. Getting involved with PNC was a way for me to give back, to use the skills I am learning to help out members of the community."

What are some of the biggest health-equity issues faced by your patients?

"Not having health insurance is the largest disparity issue, but a lot of inequities also come from language barriers and a basic lack of knowledge of the health care system. People need support figuring out services and available resources."

How do PNC volunteers try to address those issues?

"We offer translation services for our patients. The majority who need interpretive services are Spanish-only speakers. We also have a team of volunteer community health workers who help patients locate resources for housing, employment or insurance. We also make referrals to outside facilities that we know are low cost if patients have any concerns that we can't treat at our clinic."

AQUI PARA TI

Even under the best of circumstances, raising teenagers can be a challenge. Parents, in general, are coached on how to work with newborns and school-aged children, but most public health programs don't address how to deal with adolescents. Raising a teen when you are a recent immigrant who speaks limited English and have to work long hours to make ends meet can be a recipe for stress and anxiety—and an opportunity for growth.

That's the situation for many Latinx parents in Minnesota, says Maria Veronica Svetaz, MD, MPH, medical director of Aqui Para Ti (Here for You), a a trauma-sensitive positive youth development clinic for Latinx youth ages 11-26, funded by the Eliminating Health Disparities Initiative (EHDI, MDH) at Hennepin Healthcare. The clinic is now a DHS-certified Primary Care Behavioral Health Home.

"My favorite phrase is, 'adolescence happens to a family,'" Svetaz says. "Over the years, I've noticed how lost immigrant parents of teenagers are feeling, particularly our immigrant Latinx parents, as they are not familiar with the local rites of passage of growing."

Svetaz confirmed her observations in 2000, when the Amherst H. Wilder Foundation conducted a survey of the Latinx community in West St. Paul, asking parents about the most pressing health care needs.

"The top need listed was care for diabetes," Svetaz recalls, "the second was a tie: care for back pain and help raising teens. The parents wanted coaching. And the kids needed support."

Svetaz set out to develop a program that would focus on the needs of Latinx teens and parents, one that took into account adolescent physical, mental and social health—while at the same time uncovering and supporting the needs of parents.

"We knew we needed to have a different model that was in synch with our cultural values and grounded in a group identity," Svetaz says. "As Latinos, our whole approach is different from what many white Europeans value."

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AQUI PARA TI *(continued from previous page)*

Because family connectedness is a central feature of Latinx culture, Aqui Para Ti parents are included in treatment programs. Just like the teens, they complete intake surveys that assess their concerns and help staff develop a treatment plan that tailored to their family's needs.

"We're all in this together," Svetaz says. "And we're all working toward the same goal."

What has been the most surprising finding from your surveys?
"In 2010, we decided to add a depression screen for parents. What we discovered was that our parents are far more depressed than the teens, and that is a reflection of social inequalities. It was also great to see that for the majority of our teens, their parents were their role models."

What mental health needs are unique to Latinx youth?
"Mental health is a central focus of Aqui Pari Ti's services, as this represents the wear and tear of their harsh social context. Since the beginning of the clinic, we've been asking questions pertinent to the immigration journey, such as 'Have you been separated from your parents?' These past years, the clinic has seen a surge in forced family separation; it is now eight times greater among our teens. Many kids who have been separated from their parents get depressed and start failing in school. We've seen a real surge in depression and anxiety among the teens in our clinic, most likely due to the shift toward anti-immigrant policies in our country. Fear and hate speech hurt our young U.S. citizens."

AMERICAN INDIAN FAMILY CENTER

American Indians face some of the starkest health disparities in the United States. With the lowest life expectancy in in the nation, a higher chronic disease burden, high rates of addiction, domestic violence, poverty and historical trauma, this group has not seen much success through mainstream medical care.

In response to this unfortunate reality, staff at American Indian Family Center (AIFC), a comprehensive nonprofit health care provider based in St. Paul, have chosen to take an innovative approach to providing health care, by treating their patients using a mix of traditional and conventional healing practices.

Jessica Gourneau, PhD, LP, AIFC, clinical director, says this approach is embedded in every aspect of the center: "Because so many Indian families are surviving, not thriving, we found that for many of us, the best way to approach healing is to go back to traditional treatment methods. This means that every therapist and every person in the building keeps traditional medicines like tobacco in their office. We also keep them at the front desk. This is how we approach everything here."

In the American Indian community, a traditional approach to healing means relying on the wisdom of elders. Gourneau explains that AIFC employs a team of Native elders who guide decision-making on traditional healing grants approved through the State of Minnesota and consult with individual clients, helping them build deeper connections to their roots.

In an acknowledgment of the larger impact of historical trauma, AIFC therapists are trained in trauma-focused treatments, Gourneau says: "Around 85 to 90 percent of our clients are diagnosed with some form of complex trauma." Therapy appointments are blended with traditional wellness practices like sweat lodge or other healing ceremonies.

"We started to do community healing services once a month," Gourneau says. The response has been dramatic and positive. "Every month, we have people come up to us and say, 'Tonight I was thinking about killing myself and after being here I decided I am not going to do that.' They were feeling socially isolated and desperate. There are a lot of people yearning for that traditional healing piece."

What are the most pressing health equity issues for your patient population?
"Chronic homelessness and violence within the situations they are in that lead to addiction and other serious health conditions. A lot of families have a lot of trauma going on. This leads to increased vulnerability to being exposed to violence."

What helps you feel good about AIFC's approach to care?
"Our mission statement is 'Help American Indian families to thrive,' and our focus on traditional treatment helps us get closer to achieving that." **MM**

Andy Steiner is a Twin Cities freelance writer

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ON THE FRONT LINES OF HEALTH EQUITY

PEOPLE WHO MAKE A DIFFERENCE

BY SUZY FRISCH

Physicians see stark disparities in health outcomes for different patient populations all the time. The diversity of causes mirrors the distinct efforts of Minnesota clinicians to tackle the complex roots of these disparities. Many physicians and public health experts aren't waiting for others to dive in and develop solutions for health equity. These six individuals are leading the way, from teaching future physicians about implicit bias to developing community-led health programs and advocating for policy changes.

MARY OWEN, MD

Family medicine physician for the Fond du Lac Band of Lake Superior Chippewa

Director of the Center of American Indian and Minority Health (CAIMH) at the University of Minnesota Medical School, Duluth campus

Assistant professor of medicine in the Department of Family Medicine and Biobehavioral Health

Mary Owen, MD, pursued a career in medicine to provide the kind of care to Native Americans that she rarely received herself. A member of the Tlingit nation, who grew up in Alaska, Owen earned her medical degree from the University of Minnesota. Then she returned to Juneau to practice medicine. When the CAIMH director position opened 11 years later, Owen was eager to perpetuate its mission. She helps other Native students become doctors while educating future physicians about her people, their history of trauma and health disparities.

Why did you get involved with health equity work?

We're addressing Native American health and, in doing so, we're addressing health disparities for other populations as well. We train people from Native communities and hope that they return to those communities to work. Within the Bemidji Area Region of the Indian Health Service, we have a 50 percent vacancy rate for physicians. We want to recruit people who will serve there, and we know that Native doctors are more likely to return to Native communities. We need a pipeline to increase the numbers of Native students who go to college and medical school. Only 20-40 Native American physicians graduate from medical school out of 20,000 people who graduate in this country each year.

How are you addressing health disparities?

I educate all of the medical students in Duluth about Native American health. Doctors who work in Minnesota will come across Native patients, and we have distinct needs and issues that they should understand. We have 10 hours of required curriculum around Native health. People in the United States are not aware of Native history. They don't know about the boarding schools and relocation of tribes and genocidal policies that were intended to wipe out our culture and the impact those acts had on the Native psyche and health.

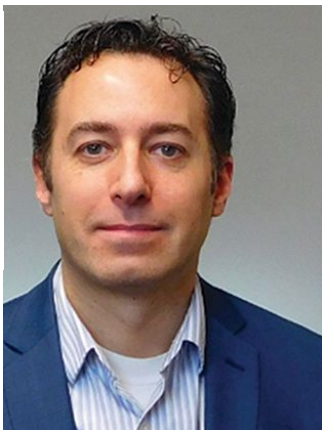
We teach students about this historical trauma so that when they meet patients, they don't assume their health is the sum of poor choices. We have huge disparities, but if people don't know us, how can they attend to the disparities? We want them to recognize the impact of social determinants of health and meet patients where

they are with trauma-informed care and respect for what they might have gone through. Then they can use that information to guide their patients' health care and have patients lead them where they want to go with their care.

How do you feel about the future when it comes to health equity?

I'm really hopeful. I just taught those 10 hours and at the end, I asked for a reflection on what students learned about barriers to health care for Native American people and their role in the future. By far, most of the students were happy that they had learned this. They were interested in using this knowledge and applying it to patient care. The medical school's curriculum office is suggesting that maybe we need to have more than 10 hours and embracing the idea of making social determinants part of the curriculum. People seem on board with addressing the gross inequities we have in our country.

MICHAEL AYLWARD, MD



Internist and pediatrician who practices at the University of Minnesota Community University Health Care Center (CUHCC)

Associate professor of medicine and pediatrics and program director of the University's Medicine Pediatric Residency Program

President of Minnesota Doctors for Health Equity

From the start of his medical training, Michael Aylward, MD, has been motivated to care for underserved populations and to train medical students and residents to do the same. That work has been fulfilling. But Aylward concluded that physicians have a unique ability to advocate for changes to improve the macro issues affecting patients. He joined with other physicians to start Minnesota Doctors for Health Equity in 2017, aiming to train doctors how to promote changes that foster health equity.

Why did you get involved with health equity work?

Minnesota is an important place to be doing this work on equity because there are significant educational and health disparities here. When you start to pay attention to patients' stories and their struggles with getting medication and access to health care, housing and food, you begin to see that there are a lot of people struggling with a lot of different aspects that directly impact their health.

During the last three years, I've really gotten involved in advocacy efforts, specifically focused on health equity. I realized there was more work to do outside of the patient room. As physicians, we are privileged. We can walk into certain rooms and say things that other people cannot, and we should be doing that. When you juxtapose the feeling of powerlessness in the clinical environment with the things you can do outside of it, it drives you to do more.

How are you addressing health disparities?

Our focus at Minnesota Doctors for Health Equity is really on educating physicians to be effective advocates. We want to have as many health professionals' voices in Minnesota speaking about issues of health equity in whatever domain they are in. We want to educate lawmakers and community members about health policy and what it means when someone proposes a new law. How does that impact people? The thing that drives us is to get as many people using their voices to be change agents in whatever way they can.

There are a lot of issues that physicians can speak to from the perspective of health and public health. At the University, we're trying to increase awareness and collect data on health disparities so we can close the gaps. Also, the health systems of Minnesota are huge employers; what they do around family medical leave and making sure everyone working in the medical system has a living wage and good health insurance and housing—these are impactful decisions. We're also talking to lawmakers and testifying when they need more information about health issues.

How do you feel about the future when it comes to health equity?

In the last 10 years, we've recognized that there are health disparity issues in Minnesota. There is increasing realization that these health disparities affect everyone, they are costly and they weigh society down. There are many groups and physicians and health systems doing things to make changes both within the walls of the health system and beyond. There's a growing movement that these things are important, so it's promising.

LAPRINCESS BREWER, MD, MPH

Cardiologist at Mayo Clinic, Rochester

Assistant professor of medicine in the Mayo Clinic Division of Preventive Cardiology/Department of Cardiovascular Medicine

National Institutes of Health–funded researcher who focuses on cardiovascular health disparities

As a George Washington University medical student, LaPrincess Brewer, MD, MPH, was inspired to address the underlying causes of patients' health issues. She saw many patients referred to as "frequent flyers" whose health care providers didn't take time to investigate both the medical and the psychosocial factors behind their recurring problems. Brewer pursued a master's degree in public health from Johns Hopkins University, focusing on epidemiology and biostatistics to wield data against health disparities. Ultimately, she came to Mayo Clinic for a fellowship in cardiology. She is now a faculty member in the Department of Cardiovascular Medicine.

Why did you get involved with health equity work?

African Americans in Minnesota have a higher incidence of cardiovascular disease and they die earlier from cardiovascular disease than their white counterparts. That fuels me to address these disparities in Minnesota and on a national level. Some of the reasons African Americans die earlier include uncontrolled cardiovascular risk factors like high blood pressure, diabetes and poor health behaviors such as physical inactivity and unhealthy diets. African American women have worse cardiovascular health disparities than any other racial and ethnic group, influenced by unique psychosocial factors or social determinants of health such as high stress and stressors. We need to build a culture of health to prevent diseases and help people control them so that they can live healthier and longer.

How are you addressing health disparities?

During my public health program, we developed the Fostering African American Improvement in Total Health (FAITH!) program with an east Baltimore church. They wanted to learn more about how a healthy diet and nutrition can prevent chronic illnesses. We had a great relationship with the church that truly changed the culture of eating from within, with dissemination outside the church.

During my first year of cardiology fellowship at Mayo, I met with three pastors in Rochester who wanted to bring FAITH! to their churches. They saw the disparities in real life, with people suffering from hypertension, diabetes, heart attacks and strokes. We created a community-based research project and delivered a 16-weeks, face-to-face health education program centered on cardiovascular risk factors. We had activities that included cooking demonstrations, fitness classes, seminars by Mayo Clinic health professionals and support groups. We had several improvements in cardiovascular risk factors.

Participants provided us with insights that they really wanted a way to share this information with their families and communities to reinforce the concepts they had learned. With this feedback in mind, we used a participatory design process to develop a mobile app with African American community members. It includes culturally-tailored education modules on key cardiovascular risk factors, including those from the American Heart Association Life's Simple 7. It also has a social networking piece that truly builds a community of support. Participants in our app-based program had several improvements in cardiovascular health metrics of the Life's Simple 7, including blood pressure, diet and physical activity. This in turn works to prevent cardiovascular disease in this community.

How do you feel about the future when it comes to health equity?

I am extremely optimistic, not only because of the success of my work with FAITH!, but also because of efforts within our national societies of cardiovascular medicine. Just this year, the American Heart Association and the American College of Cardiology released guidelines for the prevention of cardiovascular disease. For the first time ever, they made a Class 1 recommendation that clinicians, including cardiologists, must address the social determinants of health. This is huge and groundbreaking! Diagnosis and management of disease with cutting-edge technology is central to our role as clinicians, but we also have to consider going to where people live, work, play and pray to better understand what influences their health. We have to think more broadly about how we are preventing people from getting ill in the first place, and what will truly help with eliminating cardiovascular health disparities. It will take leadership of hospitals, academic medical centers and health systems to recognize the importance of addressing the social determinants of health in order to improve health metrics and health outcomes. It's not something we can do overnight, but I am confident that we will accomplish this feat!

CUONG PHAM, MD

Internist and pediatrician at the University of Minnesota Medical Center and the Community University Health Care Center (CUHCC)

Assistant professor of medicine in the Division of General Internal Medicine

Treasurer of Minnesota Doctors for Health Equity

Cuong Pham, MD, came to Minnesota at age 2 as a refugee from Vietnam. He wanted to become a physician to give back some of the help he and his family received. With a personal understanding of the immigrant experience, he aims to provide medical care to other refugees and immigrants, many of whom experienced significant trauma. At CUHCC, Pham helps provide a one-stop shop for people with challenging conditions, aiming to serve as an access point and equalizer for the disparities they face.

How are you addressing health disparities?

Ryan Kelly, MD, and I got a grant from the Substance Abuse and Mental Health Services Administration for community-based research to find the best approach to reach out to patients in a culture-centered and family-centered way. We also received a clinical grant from the University, in collaboration with Fairview. If we as addiction specialists weren't on the medical service at the hospital and someone came in with endocarditis and addiction, it was a black hole to get treatment while they were hospitalized for IV antibiotics. We're starting an addiction consult service, with a care coordinator or social worker and a peer-support person. The team can help get the person with addiction into appropriate treatment and connect them to the community around the University itself.

Why did you get involved with health equity work?

I have been a clinician for most of my career, but in the last three or four years, that has changed. We started having overdoses occurring frequently in our bathroom. As overdoses increased, we needed to do something about the epidemic. I became an addiction specialist. I was seeing what's happening in the Native American community, which faces more health inequities than any other community, around issues of addiction. They are dying in large rates from overdoses, family separation, interaction with the criminal justice system. I started thinking about how we're not talking to this community in a way that's helpful. When I started prescribing Suboxone, I saw that this was so complicated and that there were many social determinants of health. And then working with the immigrant population, there are so many barriers that stop someone from doing well with their health, like language, health literacy, being able to maneuver the health care system and understanding how insurance works.

How do you feel about the future when it comes to health equity?

We're holding steady. Physicians don't feel empowered most of the time to be part of the discussion. Until that happens, I think we'll be in this place for a long time. Physicians do have a viewpoint that others don't because we're on the ground seeing patients, but most of the discussion and work on equity happens with administration or people who work with policy because they have that time built into their work schedule. Health equity is not part of my job description, but it should be. If I'm not working on that part of my patient's life, I'm going to hit barriers left and right. We should expand what physicians do and incorporate health equity in our daily practice. There is so much we can do to train students and residents so they feel comfortable saying, "This change needs to happen in the system for our patients, and this is how we can do it."

RACHEL HARDEMAN, PHD, MPH

Assistant professor in the Division of Health Policy and Management at the University of Minnesota

National Institutes of Health–funded researcher who focuses on minority health, health disparities and equity

Member of the Minnesota Maternal Mortality Review Committee, the CDC Maternal Mortality Review Information Application Bias work group and the Planned Parenthood of the North Central States board.

Rachel Hardeman, PhD, MPH, knows that racism is a fundamental cause of the social determinants of health, and she uses her expertise in public health and population health science to analyze its effect on reproductive health. She covers a lot of ground, including developing a curriculum for medical students about racism in the health care system and researching the impacts of violence, mass incarceration and segregation on reproductive health.

Why did you get involved with health equity work?

I grew up here in Minneapolis, I'm African American, and I saw very clearly from a young age that not everyone in my community had the same opportunity to be healthy. That led me during my doctoral training to study health inequities. The more I learned about the history of our health care system and the history of our country, I saw that all lives weren't valued in the same way. It's not just an access issue or a health insurance issue. There are all these other complex pieces of the puzzle that make it really hard for people to be healthy. I study reproductive health becasue the start of life is critical for intervening and creating a level playing field. When an infant starts their life at a disadvantage, the cycle continues. We need to think about ways to do this better and to dismantle the systems of oppression that have allowed this to happen for so long.

How are you addressing health disparities?

Some of the work I've done in medical education is to develop and pilot test an antiracism curriculum for first-year medical students. We are not necessarily preparing our future health care workforce to equitably and authentically serve our changing communities and populations. We're the only industrialized nation with a rising maternal mortality rate, and black women are three to four times more likely to die in the first year after childbirth. I've been developing training and curricula that can provide a clearer understanding of the history of racism and implicit bias with respect to maternal mortality and other health outcomes.

There are steps we can take to address structural racism, like diversifying the workforce and supporting the development of community-led programs. We have done research on culturally-centered care with Roots Community Birth Center in Minneapolis. It's grounded in the idea of meeting people where they are and honoring their life experience and culture, approaching care from an asset-based model instead of a deficit-based model.

How do you feel about the future when it comes to health equity?

Some days I am super hopeful and some days I think we're in trouble. There is a lot more attention on these issues, certainly in the past two years, and often, with the attention comes resources. What frustrates me is that a lot of the work feels like we're trying to stop the bleeding versus an overhaul of the entire system. I think there are a lot of smart, motivated people doing this work and I get to mentor and advise students who are incredibly smart and motivated. That gives me hope. But a lot of the issues with health inequities require that we talk about power in a way that's really uncomfortable for people. These problems didn't happen overnight. I think it will take a fundamental shift in our values and beliefs as a society. We have to allow those closest to the pain to lead the work. This shift takes time and it takes effort and an intentional willingness for people with power to give it up.

CME credit

You can earn CME credit for reading the information in the three articles on health equity in this issue, then responding to a series of questions online.

To receive CME credit, complete and submit the online evaluation form http://mnmed.org/magCME. Upon successful completion, you will be emailed a certificate of completion within two weeks. You may contact the MMA with questions at cme@mnmed.org. Participants must complete all necessary activity components to be eligible to claim CME credit.

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the Minnesota Medical Association. The Minnesota Medical Association (MMA) is accredited by the ACCME to provide continuing medical education for physicians.

The Minnesota Medical Association designates this activity for a maximum of .25 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

DANIELLE ROBERTSHAW, MD

Family medicine physician at Hennepin Healthcare

Senior medical director of the Hennepin Healthcare Community Connections Care Ring and medical director of Hennepin County Health Care for the Homeless

Assistant professor of medicine in the Division of General Internal Medicine at the University of Minnesota

When people are homeless, they often experience compounding health disparities. Danielle Robertshaw, MD, devotes her career to breaking down barriers to access and helping homeless patients get the care they need. Her work ranges from treating patients at low-barrier Hennepin Healthcare clinics and in homeless shelter clinics with Health Care for the Homeless, to making institutional changes to better serve this population. A staunch believer that health care is a human right, Robertshaw creates innovative care models and partnerships to better meet her patients' complex needs.

Why did you get involved with health equity work?

I never wanted to be a doctor. Then I did public health work in developing countries and realized that often things show up that require clinical expertise. So I returned to the United States to go to medical school. During school, I got involved locally with a homeless clinic and saw that we had essentially Third World needs in the United States. As a doctor I started out doing street outreach in Washington, DC, and focused on developing different models for meeting the unique needs of the homeless population. I've always loved that and continue to do that work at Hennepin. My patients often have had negative interactions with the health care system and are hesitant to approach it. If I can approach them with dignity and respect so that we can better understand and address their needs, it's an amazing way to think about how you can impact the health of the individual patient and a population.

How are you addressing health disparities?

Think of health conditions in the overall population such as diabetes and heart diseases, and adults who are homeless will have the same conditions. But they are frequently diagnosed in a crisis situation, for example presenting to the Emergency Department in a diabetic coma. They are often disconnected from health services where they would get routine health screenings. Competing priorities of daily survival—where they will get their next meal or sleep that night—make it more challenging to follow up on chronic health conditions. People experiencing homelessness are often sicker than their housed counterparts and die much earlier. The average age of death for a chronically homeless adult is around 47 years, despite an average life expectancy in the United States closer to 80 years.

Race, ethnicity and language are commonly collected data points through the health care system, but housing status isn't. As a health care system, we are working on processes to consistently identify and understand our patients' social needs, including housing status. If you don't know patients are homeless, you can't change the way you provide care to better address the unique challenges of being medically ill without a home. We also do individual care plans that acknowledge and incorporate the lack of housing so that we can approach things differently, including around discharge planning when leaving the hospital. Sometimes they may go to a homeless medical respite program where they can recuperate and get connected to social services, housing resources and primary care.

We also have an Accountable Care Organization through a partnership of Hennepin Healthcare, Hennepin Health Insurance, Hennepin County and NorthPoint to innovate and work together on patients' complex needs. For example, we have mobile social service navigators working in the community to assist patients in connecting to services for mental health, substance abuse, housing and other needs to help address gaps in the traditional health system.

How do you feel about the future when it comes to health equity?

I am hopeful. I think we are always worrying about the political climate that influences policy in a way that may not support public benefits for those who need them most, like Medicaid expansion. I worry about policy decisions that could backtrack on progress. I'm fortunate to work in a place that gives me hope through its mission and an unwavering commitment to serving vulnerable populations. I'm also seeing broader community interest to solve these problems. The way we approach health and social needs has shifted quite a bit. Health systems see a role for themselves, and want to partner with others in the community to be part of the solution It would be hard to do my work if I didn't have hope. **MM**

Suzy Frisch is a Twin Cities freelance writer.

PHOTO BY KATHRYN FORSS

Day at the Capitol provides a great opportunity for physicians to meet with legislators face to face.

Bridging the Gap: A 2020 legislative session preview

Several health care issues are likely to dominate the 2020 legislative session when legislators return to St. Paul on February 11 for the 2020 legislative session.

Two items in particular—access to insulin and mismanagement of state resources at the Department of Human Services (DHS)—have received significant attention by the media and lawmakers alike since the 2019 session ended in late May.

Much of the summer and fall at the Capitol involved partisan recriminations about the failure to pass legislation to provide access to insulin for low-income Minnesotans without health insurance or high deductibles that make the drug unaffordable. House Democrats have proposed to provide emergency insulin at pharmacies funded by a levy on insulin manufacturers. Senate Republicans, meanwhile, have proposed building upon existing patient assistance programs operated by insulin manufacturers. Under their plan, individuals would confirm their eligibility using MNsure prior to having their physician complete paperwork to be submitted to the assistance program. In addition, insulin would be sent to the prescriber's clinic for the patient to pick up. The MMA has expressed concerns that many physician's offices are not set up to safely store, label and dispense insulin.

Since the summer, Minnesota's Department of Human Services (DHS) has been rocked by reports of financial mismanagement and significant turnover of senior staff. DHS was found to have improperly managed tens of millions of dollars in payments to some providers, with many tribal governments and counties potentially stuck with the bill for DHS's errors. Legislators, particularly the Senate GOP, will be certain to continue to cast a critical eye on the mismanagement of taxpayer dollars at DHS.

Plenty of other issues

House Democrats, meanwhile, are likely to take up legislation to legalize the sale and use of recreational cannabis. House DFL leaders have traveled the state throughout the summer and fall to build support for the measure, though the GOP-led Senate remains opposed. In fact, the Senate Judiciary Committee voted the bill down during the 2019 session.

Given that 2020 is the second year of the two-year biennium, the focus at the Capitol will be on legislation that has policy, though not financial, impact. Legislators will also consider a bonding bill to fund large capital projects such as university buildings, municipal infrastructure and other big-ticket items. Unlike most legislation, bonding bills require a supermajority to pass, a dynamic that often creates interesting political horse-trading. While the 2019 Legislature set the two-year biennial budget, it's possible that there may be a small supplemental budget bill. In any event, there is almost certain to be no new funding available for major health care investments.

The 2020 elections will cast a long shadow over the legislative session. The November election will see all 201 legislative seats on the ballot. With the House narrowly held by the DFL and the Senate in GOP hands by a margin of only two seats, the stakes are high. The 2020 elections have even more impact given that the 2021 Legislature will be tasked with drawing new legislative districts following the 2020 census. Holding the majority when legislative district maps are drawn can give one party a distinct and enduring electoral advantage.

White coat influence

Minnesota physicians and physicians-in-training will have a great opportunity to advocate for their profession when the MMA hosts its annual Day at the Capitol, March 4.

The day begins with check-in at 12:30 in the L'Etoile du Nord Vault Room in the tunnel level of the Capitol. The program begins promptly at 1pm with a review of the MMA's top legislative priorities, a visit from a legislator or two and then meetings with your specific legislator. The day will end with a reception at the Commodore Bar & Restaurant in St. Paul. For more information, visit www.mnmed.org/DAC20.

The MMA's top priorities for 2020 include:

1. Reduce minors' access to tobacco and e-cigarettes.

- Increase the age to purchase tobacco and vaping products to 21.
- Prohibit the sale of flavored tobacco and other flavored nicotine-containing products.

2. Prevent firearm injury and death.

- Expand criminal background checks to all firearm transfers and sales.
- Enact a "red flag" law to allow law enforcement to protect those who may be a danger to themselves or others.
- Authorize the use of firearm ownership data for public health research or epidemiologic investigation.

3. Increase immunization rates.

- Repeal existing personal belief exemption (PBE) from Minnesota's childhood immunization laws.
- Fund education and outreach efforts in communities with lower immunization rates.

4. Reduce third-party interference in patient care.

- Prohibit insurers from forcing a patient on successful medication therapy to change medications during an insurance benefit year.
- Extend current law that prohibits HMOs from denying a service simply for failure to ask for a prior authorization to all types of health insurance products.
- Require insurers to provide real-time prescription benefit information and notice of prior authorization requirements in compliance with nationally developed standards.

Reclaiming the joy

BY MARILYN PEITSO, MD,
MMA PRESIDENT-ELECT

Medicine is an intensely challenging profession. The education and training requirements for physicians are rigorous and demanding. Illness and injury do not recognize an 8-to-5 schedule. Electronic health records have turned physicians into typists and box-checkers. We spend far too much time wrangling with insurers to get our patients the care they need. we increasingly are de-professionalized when we are called "providers." We rightly worry about professional liability and legal compliance. Our best efforts to improve the health of our patients are confounded by economic and social forces beyond our control. We are often expected to meet specified productivity standards.

And, when compared to other professions, we have nearly twice the risk of burnout and work/life dissatisfaction.

In fact, it is nearly impossible to go through a day without hearing about the hassles, frustrations and challenges associated with practicing medicine today. It has been defined as the "quadruple" in the Quadruple Aim (improving the work life of health care clinicians and staff) and the prestigious National Academy of Medicine launched an "action collaborative" on clinician resilience and well-being in 2017. There is nearly universal agreement that clinician burnout merits attention because the quality of care provided to patients is at risk.

This focus and attention is critical and, in many respects, overdue. Many Minnesota clinics and systems have quantified burnout rates in their organizations, and many are now dedicating staff and resources on interventions aimed at alleviating the stress, dissatisfaction and burnout plaguing their clinicians. The MMA, too, has made physician professional satisfaction a core strategic focus.

Despite this attention, I have heard many physicians balk at many of the targeted solutions, and bristle at the idea of yoga classes or meditation as a cure for EHR documentation requirements, complex and inefficient administrative systems or RVU production targets. In my opinion, alleviating burnout is a "both-and situation:" *both* a matter of personal well-being *and* a matter of broader systemic change. Just as we encourage our patients to eat well, exercise, rest and manage stress, so too must we as physicians attend to our own self-care. At the same time, we also need to champion change in our practices, systems, environment and profession. The MMA is our collective partner to advocate for the kinds of systemic and environmental change needed to reduce administrative burdens, such as prior authorization. It's also our most visible champion for our profession.

As we work to simultaneously address the sources of professional burnout and champion the medical profession, the MMA is launching a new feature in *Minnesota Medicine*—"Reclaiming the Joy"—to highlight the reasons most of us went into this profession in the first place and to share real-life examples of practical steps that can be taken today to address the problems that pull us down.

The joy is still there. I experience it when a child ready for discharge from the hospital gives me a high five, when I have the time to explain a child's complex care needs directly with anxious and worried parents—and when I help make a difference in the direction of health care in Minnesota by bringing my voice and experience to state policy decisions through my involvement in MMA.

Medicine is an intensely rewarding profession. Physicians are consistently ranked as the most trusted professionals. We have at our access science, tools and technologies to improve and extend lives like never before in human history; we are well compensated; we are entrusted with our patients' most personal and private information; our work generates jobs and other economic growth in our communities; the voice of physicians on matters of health and public policy is respected and impactful; and we bear witness to the beginning and end of life.

I invite you to submit your stories, your experiences, your suggestions and your ideas for how all Minnesota physicians can reclaim the joy of practicing medicine. Send your submissions to kwinning@mnmed.org.

Janet Silversmith
MMA Chief Executive Officer

FROM THE CEO

Happy 2020! As a new year begins, the MMA once again turns much of its attention to the state legislative session. In November, the MMA board invited leadership from state specialty societies to share their priorities for 2020 and it was exciting to see the degree of alignment among organized medicine. This year, the second year of the state biennium, the session begins February 11. Because it is a non-budget year, the length of the session is shorter but, because it is an election year, the political stakes remain high. The MMA will have both an offensive strategy and a defensive one. On the offensive side, the MMA will work to advance specific legislative proposals to accomplish four key goals: 1) reduce minors' access to tobacco and e-cigarettes; 2) prevent firearm injury and death; 3) increase immunization rates; and 4) reduce third party interference in patient care. On the defensive side, the MMA expects, at a minimum, to shape insulin-access proposals, assert policies to protect public health in recreational marijuana bills and respond to various scope-of-practice expansions. Don't forget to mark your calendar for March 4 for the MMA Day at the Capitol! See Page 25 for more details.

MMA members can earn their state-mandated opioid education credits for free—now! In 2019, the Legislature enacted a requirement that all physicians and other prescribers obtain two hours of continuing education on best practices in opioid and controlled substance prescribing. This new requirement applies to all license renewals between January 2020 and December 2022. Based on input and guidance from an expert advisory committee, the MMA has created an online, self-paced educational activity that is available free of charge to MMA members—another example of the value of your MMA membership! Visit mnmed.org for details.

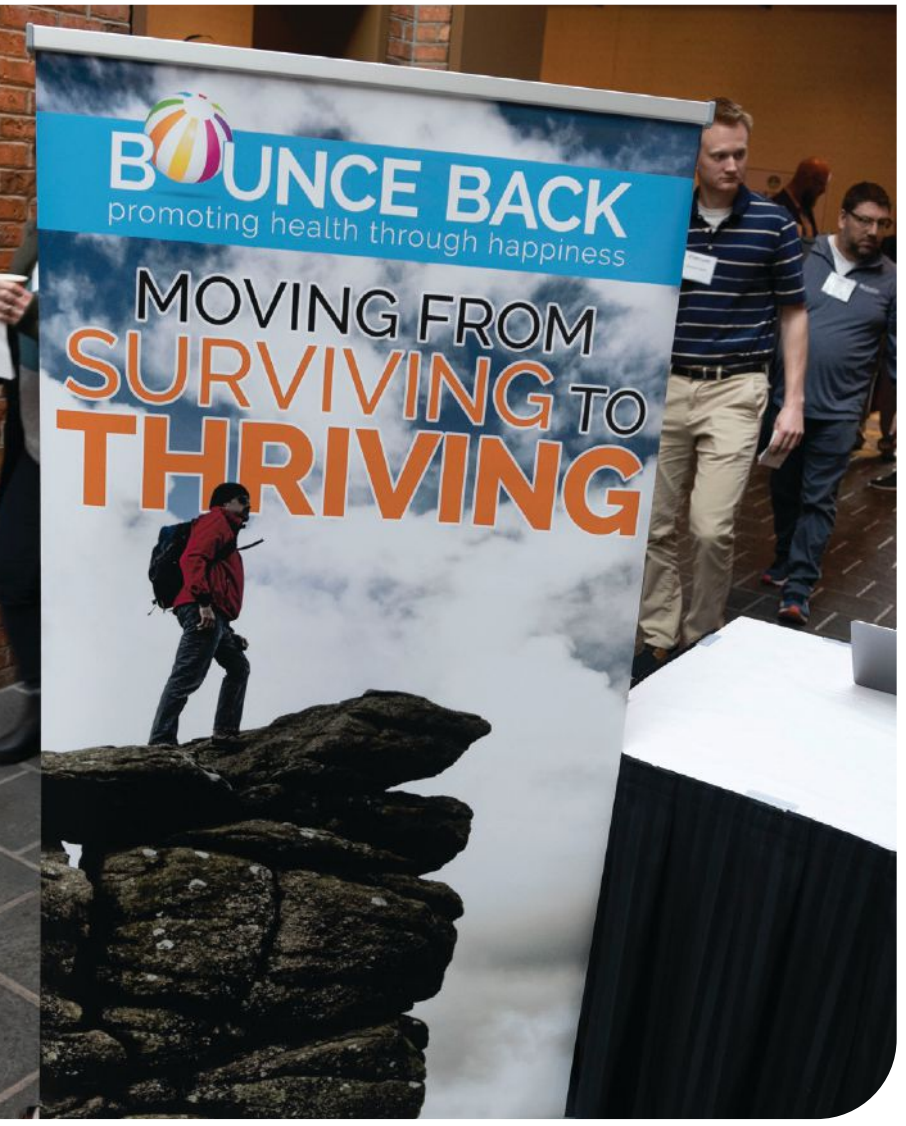
In this issue of *Minnesota Medicine*, I'm excited to announce the launch of a new section, "Reclaiming the Joy" (see opposite page). The MMA, like many organizations, is committed to addressing the causes of physician dissatisfaction and burnout. Much of MMA's focus, of course, is on the environmental and systemic causes of burnout, including administrative complexities and inefficiencies. The MMA's work to create a new approach to quality measurement and its efforts to streamline the prior authorization process are just two key examples. But the MMA also has an important role to play in celebrating medicine. With "Reclaiming the Joy," we hope to once again lay claim to the wonders, privilege and joy that is the core of the work of physicians and the practice of medicine.

It's not too late to renew your membership! How membership works is different for everyone—some renew individually (mnmed.org/membership), some clinics contribute directly to dues, others tap CME funds to support MMA. Regardless of how membership works for you: thank you! Your support is critical to make sure that the voices of physicians are heard.

Did you know? The MMA has a political action committee, known as MEDPAC. Although many of us dislike what often feels like the outsized influence of money in politics, all advocacy efforts—including that of the MMA—rely on financial contributions to shape the political atmosphere. MEDPAC works to elect pro-health and pro-medicine candidates and is guided by a physician board of directors. MEDPAC receives no money from the MMA or from MMA member dues, but is wholly supported by voluntary contributions from individuals. Learn more at www.mnmed.org/MEDPAC.

Here's to a successful and productive 2020!

News Briefs



MMA hosts conference on resilience for 300 health care workers

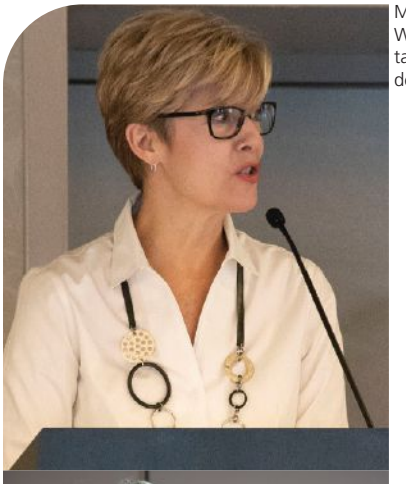
In December, the MMA partnered with the Bounce Back Project to host this year's Healthcare Provider Resilience Conference in Plymouth.

Nearly 300 health care workers from Minnesota, Iowa and Wisconsin attended the two-day event, which was dedicated to improving the well-being and resiliency of physicians and other health professionals.

The annual conference is a collaboration of physicians, nurses and hospital leaders from multiple health systems working to impact the lives of individuals, communities and organizations by promoting health through resilience.

ALL PHOTOGRAPHY BY KATHRYN FORSS

In between sessions, attendees talked with a variety of vendors.



MPR's Cathy Wurzer discussed talking about death.

Jacquelyn Fletcher of Heartwood Healing was one of dozens of presenters at the conference.

PHOTO BY XXXXXXX

Board votes on open issues proposals from members

At its November meeting, the MMA Board of Trustees voted on all of the open issues proposals that were submitted for consideration in 2019. All issues were vetted by the MMA Policy Council.

A total of 24 issues were submitted: two issues resulted in new MMA policy that was adopted by the Board; four resulted in current MMA policy being reaffirmed; eight were referred to an MMA committee for further study; six were not adopted; and seven were reserved by the Policy Council for further discussion. Here are the results of each:

ISSUE	SUMMARY	RESULT
Trainee access to health care	Asks MMA to advocate that all training programs be required to give trainees time off for medical, dental and mental health care.	Not adopted
Communication access in Minnesota	Asks MMA to support legislation to improve access to broadband and cell phone services in rural Minnesota.	Referred to the MMA Medical Practice & Quality Committee
Independent primary care	Asks MMA to pass policy supporting equitable reimbursement for independent practices.	Current policy reaffirmed
Politics	Asks MMA to stop engaging on political issues.	Not adopted
Legalization of marijuana	Asks MMA to oppose the legalization of recreational marijuana.	Not adopted
Reimbursement for small practices	Asks MMA to pass policy supporting equitable reimbursement for independent practices.	Current policy reaffirmed
Reproductive health	Asks MMA to support reproductive rights and access to contraception.	Current policy reaffirmed
Health impact assessment for recreational cannabis	Asks MMA to support legislation that would require the Minnesota Department of Health to conduct a health impact assessment related to the legalization of recreational marijuana.	Referred to the MMA Public Health Committee
Prior authorization	Asks MMA to advocate for minimizing the impact of prior authorizations for medical procedures.	Referred to the MMA Medical Practice & Quality Committee
Firearms	Asks MMA to reorganize and streamline MMA policy related to firearms.	Referred to the MMA Public Health Committee
Access to LARCs	Asks MMA to continue advocacy to increase access to long-acting reversible contraceptives for postpartum women.	Current policy reaffirmed
Termination of parental rights in cases of rape or incest	Asks MMA to support legislation that would make it easier to terminate the parental rights of individuals who are convicted of rape or incest.	Referred to the MMA Ethics & Medical-Legal Affairs Committee
Limiting mental health disclosure questions	Asks MMA to advocate for changes to questions related to mental health on licensing and credentialing applications.	New policy adopted
Gender equity	Asks MMA to adopt new policy related to gender equity in medicine.	New policy adopted
Access to scalp-cooling therapy	Asks MMA to advocate for legislation that would require insurance companies to cover scalp-cooling therapy.	Not adopted
TIME'S UP Healthcare	Asks MMA to join TIME'S UP Healthcare.	Retained by Policy Council
Workplace diversity	Asks MMA to support increased workforce diversity.	Retained by Policy Council
Minor consent to vaccination	Asks MMA to support legislation that would allow minors to consent to be vaccinated.	Retained by Policy Council
Promoting herd immunity	Asks MMA to repeal certain policies related to immunizations.	Retained by Policy Council
Decriminalization of drugs	Asks MMA to create and lead a task force that would discuss how to decriminalize illicit drugs.	Not adopted
Pharmacists administering vaccines	Asks MMA to adopt policy related to reimbursement for administering immunizations in primary care offices as opposed to in pharmacies.	Retained by Policy Council
Barriers to abortion access	Asks MMA to oppose any medically unnecessary restrictions on abortion.	Retained by Policy Council
Parental leave in GME programs	Asks MMA to advocate for the establishment of parental leave policies in all GME programs.	Referred to the MMA Ethics & Medical-Legal Affairs Committee

State adds two new conditions to medical cannabis program

The Minnesota Department of Health (MDH) announced in early December that it will add chronic pain and age-related macular degeneration as new qualifying conditions to the state's medical cannabis program, which began in 2014. The new conditions will take effect in August 2020.

MDH also approved two new delivery methods: water-soluble cannabinoid multi-particulates (e.g., granules, powders and sprinkles) and orally dissolvable products such as lozenges, gums, mints, buccal tablets and sublingual tablets.

Currently, the permitted delivery forms include liquid (including oils and tinctures), pills, vaporizable liquids or oils and topical applications. The two new delivery methods will become effective August 1, 2020. Minnesota law does not permit smokable or edible forms of medical cannabis. Minnesota Health Commissioner Jan Malcolm said the changes give patients more options, given concerns about potential health impacts vaping.

The program's two medical cannabis manufacturers will double the number of patient cannabis treatment centers in accordance with legislation passed during the 2019 legislative session. These new sites will allow greater access to cannabis treatment centers. LeafLine Labs has proposed centers in Willmar, Mankato, Golden Valley and Rogers, while Minnesota Medical Solutions has proposed centers in Woodbury, Blaine, Duluth and Burnsville.

MMA creates courses to fulfill opioid, controlled substances CME mandate

The MMA has developed an online, self-paced activity for prescribers in the state to meet the legislative mandate to "obtain at least two hours of continuing education credit on best practices in prescribing opioids and controlled substances." The courses went live this month.

All prescribers in the state must comply with this requirement for licensure renewals before the end of 2022.

This past fall, the MMA convened a nine-member advisory group made up of physicians across Minnesota, including experts in addiction medicine, addiction psychiatry, pain management and primary care to develop the content.

This online activity is free for MMA members. The self-assessment activity can be taken whenever it's convenient and will offer instant feedback including the answer, commentary and references for each item.

MMA board: No position on recreational cannabis

At its November meeting, the MMA Board of Trustees voted to not take a position on the issue of recreational cannabis, but rather serve as the voice of medicine by laying out seven public health considerations that should ensure state lawmakers keep public health in mind as they debate the topic.

The policy recommendation came from the MMA Public Health Committee, which noted that as policymakers continue their conversations on whether Minnesota should legalize cannabis for recreational use, it is important that they take into consideration the public health and social impacts related to cannabis use.

The considerations in the MMA policy include:

a) Research has consistently shown that human brain development and maturation is not complete until the age of 25. Therefore, individuals under the age of 25 should be prohibited from purchasing, possessing or using cannabis or cannabis-infused products.

b) Cannabis use may increase the risk of developing psychiatric disorders, including psychosis (schizophrenia), depression and anxiety, particularly among individuals with a preexisting genetic or other vulnerability.

c) During pregnancy, cannabis use may increase the risk of low birth weight.

d) Additional addiction treatment capacity and resources may will be needed, as cannabis use may increase the risk of developing substance use disorders.

e) Recognize the potential health risks, particularly among children and adolescents, associated with various cannabis inhalation delivery systems, ingestion of edibles, and exposure to secondhand smoke or vapor.

f) Drawing upon experiences with alcohol and tobacco regulation, careful attention to product packaging, marketing and advertising is needed to prevent use by children and adolescents.

g) The importance of ongoing collection, analysis and dissemination of relevant public health and safety data.

A bill to legalize cannabis for recreational use was introduced by Sen. Melissa Franzen (DFL-Edina) last legislative session. On March 7, a group of Minnesota physicians representing the specialties of addiction medicine, emergency medicine, obstetrics and gynecology and psychiatry met at the MMA office to discuss recreational cannabis. The meeting, which was called at Franzen's request, allowed physicians to share medicine's point of view on the topic.

On the calendar

Event	Date	Location
A Physician's Take: Minnesota and the Public Health Insurance Option	February 13	Bloomington
MMA Day at the Capitol	March 4	St. Paul
2020 MMA Annual Conference	September 25 and 26	St. Louis Park

Franzen's bill received a hearing before the Committee on Judiciary and Public Safety Finance and Policy on March 11, where it was voted down. While the Senate is almost certain not to revisit the issue in 2020, the House of Representatives is likely to consider the proposal in committee and it may receive a vote by the full House of Representatives. Given the Senate's opposition, legislation to legalize cannabis for recreational use is unlikely to become law in 2020.

To gather input on the issue of legalizing cannabis for recreational use, the MMA sent a survey to more than 8,600 members on May 13. Thirty-nine percent of respondents said that they want the MMA to oppose the legalization of cannabis for recreational use. Thirty-two percent said that the MMA should not take a position on the legalization of cannabis for recreational use, but rather advocate for policies that will protect the health of the public. Twenty-seven percent said the MMA should support the legalization of cannabis for recreational use, and 2 percent said they did not know what the MMA should do.

In regard to how engaged the MMA should be on the issue, 74 percent of respondents said that the MMA should be engaged, 14 percent said that the MMA should not be engaged and 12 percent said that they did not know.

On June 6, the MMA held a policy forum on recreational cannabis to educate physicians and physicians-in-training on the health effects of cannabis and what legalizing recreational cannabis could mean in Minnesota. Attendees at the forum were from both primary care and non-primary care specialties.

Currently, 11 states and the District of Columbia have legalized recreational cannabis. Gov. Tim Walz has expressed his support for legalizing it. Given the split legislature, it's unlikely that legislation will gain traction in the upcoming session.

Minnesota Medicine wins 4 awards for excellence

In early November, *Minnesota Medicine* received four awards at the annual Minnesota Media & Publishing Association Excellence Awards in Minneapolis.

The winners included:

- Gold: "Print or Online Technical Article." For two articles on ketamine and depression, written by physicians at Essentia Health and Mayo Clinic.
- Gold: "Print or Online How-To Article." For an article on parents' hesitance about HPV vaccine, written by Robert Jacobson, MD, of Mayo Clinic.
- Silver: "Single Topic Issue, Special Section, or Special Supplement." The July/August 2018 Arts Issue.
- Bronze: "Single Topic Issue, Special Section, or Special Supplement." The March/April 2019 issue on medical cannabis.

Students, residents and fellows:

Shine a spotlight on your research

Minnesota Medicine and the MMA will highlight the work of medical trainees in the magazine and at the annual MMA conference in September. It's your chance to show your research and get professional feedback—a great advantage for physicians in training.

For details and to submit your abstract, visit **www.mnmed.org/abstracts**

Deadline for submissions: **April 30, 2020**

Randy Rice, MD
MMA Board Chair

VIEWPOINT

Practice civility

We are taught in med school, first and foremost, to do no harm. We take that oath seriously. Unfortunately, the rest of the country can't say the same, especially when it comes to politics.

2020 has all the makings of a four-alarm fire when it comes to public discourse on policy and what politicians and pundits think is right and wrong for the country. "My side is right, and your side is wrong" does not help us solve the problems facing our state and nation. Yet, that is often all you hear through the media. As physician advocates, we need to rise above the partisan bickering that is likely to continue, and to work for what is best for our patients and our practices.

All too often, many of the people we elect do not seem to be representing all of their constituents, but rather only the ones who share their party affiliation. Elected officials, and the public more broadly, would be well served to focus upon those things that bring us together, rather than those issues that drive us apart.

Many of the MMA's priority issues are not easily pigeonholed into Republican or Democratic positions. Our priorities—making Minnesota the healthiest state in the nation and the best place to practice—cut across partisan lines.

This is why I encourage all physicians and physicians-in-training who advocate on behalf of the profession to continue practicing civility.

On March 4, the MMA will host its annual Day at the Capitol, one of the association's most important advocacy events. It's an excellent opportunity to join with peers, to learn about the pressing matters that affect the practice of medicine in Minnesota and the health of our patients, and to meet face-to-face with our elected officials.

You can also help support our advocacy efforts by joining MEDPAC, the MMA's political action committee. MEDPAC, like the MMA, is focused on finding solutions to the many challenges facing our state and nation. MEDPAC's board of directors takes very seriously its job to support legislators who support physicians and patients, regardless of party.

Most state legislators run for office to do what they believe is best for the state. You may not always agree with them, but as physicians I encourage you to resist the temptation to criticize their motives. I ask that you enter the political discourse and work to stay above the fray—above the attacking, above the name calling, above the demonizing.

Our patients need us to be better than that. As physicians and Minnesotans, we are better than that. **MM**

As physician advocates, we need to rise above the partisan bickering, and work for what is best for our patients and our practices.

Tobacco in Minnesota—now and in the future

Simulated study shows a comprehensive approach is needed

BY ANN ST. CLAIRE, MPH; AMANDA L. JANSEN, MPP; ERIN O'GARA, PHD; ANNIE KRAPEK; AND DAVID LEVY, PHD

Minnesota's considerable investment in tobacco control over the past two decades contributed to a 37.5 percent reduction in the adult smoking rate. A key component to this success was ClearWay Minnesota℠, an independent nonprofit organization with a mission to reduce the harm of commercial tobacco for all Minnesotans. The organization was established in 1998 with 3 percent ($202 million) of the settlement between the state of Minnesota and major tobacco companies, and was created as a limited-life organization that will end by 2022. The activities supported by ClearWay Minnesota, including research, engaging with communities, quit-smoking services, mass-media campaigns and advocacy efforts, have been accomplished in partnership with a wide array of organizations. Individual physicians and professional associations, like the Minnesota Medical Association and Twin Cities Medical Society, have been critical supporters of this work.

Although this investment and subsequent reduction in prevalence of smoking represents progress toward improving the health of all Minnesotans through reduced tobacco-related death and disease, the work is not done. Physicians are all too familiar with the continued impact commercial tobacco products have on their patients. Cigarette use has declined, but progress has slowed in recent years and overall use rates remain high among young adults, those with less than a high-school education and other priority populations.

Public policy is the most important tool in reducing commercial tobacco prevalence rates and has contributed to tobacco control successes in Minnesota. Minnesota has passed strong statewide policies, including clean indoor air regulations and significant tobacco tax increases; other impactful policies, like increasing the minimum tobacco sales age to 21, are under consideration. However, passing future policies in Minnesota will require the continued leadership of physicians in advocacy efforts. In fact, one study on policymaking found that policymakers look to health professionals from their community as trusted and influential sources when they consider tobacco policies.

To better understand the past and future effects tobacco prevention and cessation policies play in Minnesota, ClearWay Minnesota partnered with David Levy, PhD, a policy research expert, to examine the impact of 20 years of tobacco control successes. This simulation study quantified the past and projected anticipated benefits of additional policies into the future in terms of the relative reduction in prevalence rates.

SimSmoke Model

The Minnesota SimSmoke Model projects smoking prevalence and smoking-attributable deaths over time and estimates the impact of tobacco-control policies on those rates. The simulation model was developed using information on national and state-specific smoking status (prevalence, initiation and cessation rates and relative smoking mortality risks), various population demographics (age, gender, death and fertility rates), past policies and established research on policy effects. Transitions over time are examined using a mathematical Markov process to project population change through fertility and deaths, and to project smoking rates through initiation

and cessation. Once run, the model was calibrated and validated against surveys of Minnesota smoking rates. The most recent application of the model in Minnesota extended the policy tracking period from 2011 to 2018 and added a component on smokeless tobacco initiation, use and attributable deaths for a more complete examination of commercial tobacco use in Minnesota. Policies modeled included tobacco taxes, smoke-free air, tobacco control funding, marketing restrictions, health warnings, cessation treatment policies and youth access restrictions. Two of these policies—health warnings and marketing restrictions—had minimal impact. These two federal level policies have not changed significantly over the study time period and cannot be adjusted at the state level. For the purposes of this study, the model was used to examine the impact of policies from 1993 through 2018, and then to estimate the future impact of a few new policies over the next 22 years (or through 2040).

Retrospective findings

Passing strong public policies accelerated our progress in reducing smoking prevalence. Policies implemented between 1993 and 2018 contributed to a 35 percent greater relative decline in smoking prevalence in 2018 and a projected 43 percent greater relative decline in smoking prevalence by 2040 than would occur without these policies. In addition to reduced prevalence rates, more than 20 years of tobacco-control efforts in Minnesota were estimated to have averted 7,800 deaths by 2018 and a projected 48,000 deaths by 2040 that otherwise would have been lost to tobacco-related diseases. In terms of the relative contribution of each policy to this reduction, taxes are the greatest driver of change (53 percent), followed by smoke-free air policies (18 percent), cessation treatment (12 percent), youth access restrictions (9 percent) and tobacco-control funding (8 percent). The greatest impact occurs when these individual policies complement each other and create a synergistic effect on prevalence rates. For example: media campaigns and cessation treatment programs work together to support those who are considering quitting smoking.

How physicians can engage in policy work

- **Contribute directly** to local or statewide policy processes by joining local health boards or advisory committees and/or testifying at public meetings or committee hearings.
- **Submit letters** to the editor or commentary pieces to local newspapers.
- **Share expertise** with broader community members through presentations, discussions with schools and parents and connecting directly with elected officials.
- **Engage** with medical associations, like the Minnesota Medical Association or a local medical society, who are often partners in the larger tobacco control movement.
- **Encourage** other colleagues to get involved.

To get engaged in this work, contact the Twin Cities Medical Society's Physician Advocacy Network at www.panmn.org

Prospective findings.

While Minnesota has been active in addressing commercial tobacco, increasing cigarette taxes and raising the minimum tobacco sales age to 21 have been identified as effective strategies to further reduce smoking. The Minnesota SimSmoke model was adjusted to assess the impact of increasing the minimum tobacco sales age to 21, if passed in 2020, and a future $1.50 tobacco tax increase implemented in 2021. In the absence of these policies, smoking prevalence is expected to decline from 13.8 percent of the adult population (ages 18 and above) in 2018 to 12.4 percent in 2025. These policy advances, along with continued investment in tobacco control, would result in an additional 8 percent relative decline in smoking prevalence—to 11.3 percent instead of 12.4 percent—by 2025. By 2040, smoking prevalence is expected to decline by 15 percent below what it would have been in the absence of the recommended policies (a prevalence rate of 9.0 percent instead of 10.3 percent).

With the implementation of these policies ($1.50 price increase and minimum legal age increased to 21) and continued tobacco control funding, 2,147 deaths could be averted by 2040. If the two policies were enacted but continued investments in tobacco control were reduced, the model estimates only 440 tobacco-related deaths could be averted in Minnesota by 2040, with a more moderate estimated decline in prevalence to 11.8 percent by 2025 and to 9.7 percent by 2040. Sustained funding for tobacco control (including comprehensive prevention and cessation programs, use of mass media, help for those who want to quit smoking and future policy advancements) is a critical component of comprehensive tobacco control. Without it, the synergistic impact of all policies is reduced.

Taking a comprehensive approach to tobacco control policies and continued funding has been and will continue to be the most effective way to sustain progress in reducing smoking and saving the lives of Minnesotans. While policy efforts such as raising the minimum tobacco sales age from 18 to 21 and increasing the price of tobacco would reduce prevalence rates, ongoing tobacco-control funding would double their impact. The synergistic approach of strong policies paired with continued tobacco-control funding will have a significantly greater impact than any individual effort. Without continued dedi-

cated funding for programs, cessation and advocacy, current advances may be lost as the tobacco industry annually spends more than $100 million promoting their deadly products in Minnesota.

Physician involvement

By 2022, ClearWay Minnesota and partners will have made great strides in reducing commercial tobacco's harm. After ClearWay Minnesota's sunset, partners will need resources and support to carry on the work against an ever-present tobacco industry that consistently outspends public health efforts in both advertising and advocacy.

Physicians are uniquely positioned to act as advocates for population health and are highly effective spokespersons. Physicians have a deep understanding of the medical issues involved in population health topics and how the medical system and population health programs can work together to increase the effectiveness of campaigns. Moreover, they are highly trusted sources of information for both elected officials and the public. Physicians and medical associations can serve as leaders and conveners in population health campaigns, or can work with established groups and coalitions.

In Minnesota, physicians have played a critical role in advancing policies to reduce commercial tobacco's harm. In 1986, physicians led the design and implementation of the Smoke-Free Hospitals project to encourage and assist hospitals throughout the state to adopt smoke-free policies. This momentum soon evolved into public support for the passage of legislation mandating smoke-free health care facilities throughout the state and, in fact, the nation. In the mid-2000s, physicians were engaged in efforts to pass a statewide smoke-free indoor air policy, discussing the negative health consequences of secondhand smoke exposure. Within a month, more than 400 physicians signed up to testify at hearings, meet with elected officials, attend media trainings and advocate passionately for restrictions on smoking indoors.

Public policy is the most important tool in reducing commercial tobacco prevalence rates and has contributed to tobacco control successes in Minnesota… policymakers look to health professionals from their community as trusted and influential sources when they consider tobacco policies.

More recently, physicians have been deeply engaged in local policy work to raise the minimum tobacco sales age to 21 and restrict where flavored tobacco products can be sold. When Minneapolis was designing, considering and passing its restriction on menthol-flavored tobacco products, more than 65 physicians and medical students engaged in the campaign. The need for these trusted perspectives will substantially increase as ClearWay Minnesota finishes its final three years of work addressing the leading cause of preventable death and disease in Minnesota.

Conclusions

At this time, these issues—continued investments in comprehensive tobacco control programs, raising the minimum tobacco sales age to 21 and increasing the price of commercial tobacco—are all strategies that need to be implemented statewide. Our research has quantified the potential impact these efforts can have in saving the lives of Minnesotans, but robust legislative advocacy from the medical community is needed to make it a reality. As the landscape for tobacco control funding changes over the coming years, physician involvement in the legislative process will become increasingly important. Physicians provide a unique perspective on both the toll of nicotine addiction and the importance of consistently addressing tobacco use beyond the physician/patient encounter. Physician advocacy efforts have the potential to influence the tobacco control landscape in our state and as result, significantly improve the health of Minnesotans. **MM**

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Minnesota's mental health challenges

Can we do things differently this time?

BY PAUL GOERING, MD

In the Nov/Dec edition of *Minnesota Medicine*, "Improving health for people with serious mental illness" reflected on the 10-year effort to reduce mortality in the population of the seriously mentally ill. The authors (of which I am one) identified some reason to be hopeful, but noted little objective change in health outcomes.

The story, very familiar to me, goes like this: A group caring deeply about challenges of those with mental illness assembles/rallies, tries hard to make change and lands short of the desired outcome. This has nagged me my entire career. There is something very different in the ways we think about and respond to mental illness.

The challenges we experience in Minnesota are part of a national problem that goes back to the1960s. At that time, mental health care was largely institutional, both paid for and provided by the state. Deinstitutionalization, with the promise of community-based care, has been bumpy. In *Better but Not Well*, Richard Frank argues that in the last half century, mental health care has made remarkable improvements related to health coverage, quality of treatments and number of individuals served. That is all true, for which I am grateful. Yet, there remain daunting challenges. The disability burden for neuropsychiatric disorders will soon overtake all other illness. Suicide mortality rates have risen decade over decade. Fewer than half of patients ever access care, and when they do, it is usually late in their illness and provided without adherence to best practices.

For those who do seek care, access is limited, with some of the greatest burdens when patients need help with a crisis or hospitalization. This is distinct to mental health. If mothers in active labor were told they must wait in an ED for five days to get a hospital bed, or children with appendicitis had to be transported to Fargo for care, the outcry from the community and our providers would be resounding. Yet, for all the action groups, task forces, blue ribbon panels and commissions that have come and gone in my career, that kind of access challenge remains common for the mentally ill.

It doesn't have to be this way.

Three things make me believe we can change the trajectory for every Minnesotan who needs mental health care:

The Ebola epidemic of 2013. What we did right here in Minnesota demonstrates that we can change. In just six months, we went from having no capacity or plan for responding to the looming crisis, to having a plan with capacity to serve any Minnesotan who required assessment and treatment for Ebola. We did it by aligning a vast array of stakeholders from the State (MDH, DHS), counties, hospitals, providers, communities, EMS, law enforcement and more. The actions were aligned and coordinated. And, while no one had created a budget for it, it was funded. This was a Herculean feat, and we did it. There is some irony here; as it turned out, we served not one Ebola patient. Not one. Yet every day we fail to serve scores of patients with mental illness right in front of us.

Unprecedented public attention. This is a national moment for large groups of potential allies in change. Concern for the mentally ill has moved beyond providers, families and advocates, and has captured the attention of employers, educators, law enforcement and legislators. Issues like suicide mortality rates, stigma and homelessness transcend medicine.

A confluence of local activity. Groups and individuals are trying hard from multiple directions, and pushing on multiple levers (policy, practice, relationships and decision-making power). MHA is unveiling its second "Potentially Avoidable Days Study," created to understand what limits a hospital's ability to discharge a patient who no longer needs that level of active treatment. ICSI is in its third year of the MN Health Collaborative with a focus on the increasing number of patients coming to the ED with mental health crises. The MMA has established a taskforce to understand and address the policies and other forces that create challenges faced by mentally ill patients in ERs. Major employers that are self-insured, with the help of the Minnesota Health Action Group, are looking at best practices for employee coverage. We are in the midst of a state conversation about how the agencies that serve the mentally ill are organized. Schools, police departments and municipalities are now as likely to be partners as physicians, therapists and social workers.

If ever we are to have one, this is our "Ebola moment" for mental illness. It requires us to act differently and to create a shared vision around which we organize our work, resources and outcomes. It requires a system that can assure that those most vulnerable (and requiring a safety net), are specifically considered in planning community and hospital needs. It requires the courage to name the gaps and the commitment to close them, without letting the realities of regulation and funding be excuses for inertia. Imagine a continuum of care so reliable that every one of our neighbors, patients and family members could get what they need. We failed to deliver on this promise with deinstitutionalization. Can we do better today?

A Governor's Task Force created a robust plan for change in 2016. It is waiting for us to dust if off and connect the dots. https://mn.gov/dhs/assets/mental-health-task-force-report-2016_tcm1053-263148.pdf. Whether we use this plan, or develop an alternate way to realign our resources, ownership, prioritization, accountability and authority to make change, the time is now. **MM**

Paul Goering, MD, is vice president, Allina Mental Health and Addiction.

Gangrenous cholecystitis with perforation after transarterial chemoembolization

BY STEVEN J. SKUBE, MD; CHRISTOPHER J. TIGNANELLI, MD; AND MELISSA E. BRUNSVOLD, MD

Transarterial chemoembolization is a well-tolerated and commonly-used treatment for unresectable liver tumors. Ischemic complications from the embolization beads can affect the abdominal organs.

A rare case of gangrenous, perforated cholecystitis secondary to ischemia caused by transarterial chemoembolization was reviewed. A focused literature review of this complication was performed.

A 57-year-old male with a history of hepatocellular carcinoma underwent transarterial chemoembolization of his liver tumor. Following the procedure, the patient developed acute pancreatitis. Two weeks later, he was found to have perforated cholecystitis. He successfully underwent an open cholecystectomy.

Complications after TACE occur despite procedural experience, improved technology, and more selective embolization techniques. This is a rare complication that required operative intervention.

Introduction

Transarterial chemoembolization (TACE) has become a mainstay in the treatment of unresectable liver tumors, either for palliation or neoadjuvant therapy.[1-3] There is no proven standard of treatment for unresectable liver tumors.[4,5] Some studies have demonstrated improved outcomes with TACE,[2,3] although a recent Cochrane Review found no evidence to support or refute the use of the TACE procedure.[6] Non-target embolization has the potential to cause complications.[7,8]

Acute cholecystitis is a common problem usually associated with cholelithiasis, but can present as acute acalculous cholecystitis in a minority of patients. Gangrene or perforation of the gallbladder can occur with severe inflammation or vascular compromise.[9] Treatment of acute cholecystitis is typically surgical, however patients with a high surgical risk or those who are critically ill often benefit from a cholecystostomy tube.

Non-target embolization and resultant ischemic complications following TACE can be problematic and include liver abscesses, spleen abscesses, acute pancreatitis and acute cholecystitis.[7,8] This case report presents a rare instance of gangrenous, perforated cholecystitis after TACE.

Case presentation

The patient is a 57-year-old male with a history of alcohol abuse and hepatitis C viremia (HCV) which progressed to hepatocellular carcinoma (HCC). He was initially diagnosed in 2014. He was treated at that time with sofosbuvir and ribavirin for his HCV and two sessions of TACE for HCC at an outside institution. He was considered for liver transplantation at that time, but was lost to follow-up.

The patient re-established care at a separate outside institution and received a third TACE procedure on a mass in segment 5/6 in 2017. Access was obtained via the left radial artery with a 5-French catheter. The patient was found to have a replaced right hepatic artery and an accessory right hepatic artery arising off the superior mesenteric artery. LC Bead LUMI (BTG International Inc., West Conshohocken, PA) and Embosphere Microspheres (Merit Medical, South Jordan, UT) were used for embolization of the right hepatic artery, supplying the tumor. There were no intra-procedural complications but the hospital course was complicated by acute pancreatitis (lipase, 1223) thought to be caused by ischemia due to the TACE procedure. The patient was hospitalized for nine days and eventually discharged home on narcotic pain medications for persistent abdominal pain.

TABLE 1

Basic Laboratory Data on Presentation

LABORATORY TEST	VALUE
White Blood Count	6.5
Hemoglobin	13.1
Platelet	320
Sodium	137
Potassium	4.3
Creatinine	0.69
Bilirubin (direct)	0.2
Bilirubin (total)	0.4
Albumin	3.2
Alkaline phosphatase	108
Alanine aminotransferase	39
Aspartate aminotransferase	38

Two weeks after his most recent TACE, the patient was formally evaluated for liver transplantation. As part of the evaluation, the patient underwent an abdominal ultrasound (Figure 1) and a computed tomography (CT) scan of the chest (Figure 2) as routine imaging exams. The ultrasound demonstrated gallbladder wall thickening to 12mm with layered gallbladder sludge and pericholecystic fluid. He was noted to have a negative Murphy's Sign. Because of the concerning findings and recent TACE, a magnetic resonance imaging (MRI) scan

was obtained for further characterization of the abnormal findings (Figure 3). The MRI demonstrated chronic pancreatitis with peripancreatic necrosis and perforated cholecystitis.

He was sent to the emergency department for admission after discovery of the imaging findings. He continued to exhibit mild abdominal pain, unchanged from the past week. Abdominal exam revealed mild tenderness in the right upper quadrant. Vital signs were within normal limits. Laboratory data was unremarkable except for a mildly elevated lipase (Table 1). The patient was admitted to the general surgical service overnight and laparoscopic cholecystectomy was planned for the following morning.

The patient was taken to the operating room and a four-port laparoscopic cholecystectomy was attempted. Dense omental attachments to the gallbladder and liver were encountered and a safe laparoscopic surgery could not be completed. The surgery was converted to an open cholecystectomy. The gallbladder was carefully dissected from the omentum, and several purulent, bilious fluid collections were encountered outside of the gallbladder wall. The gallbladder wall was thin and the perforation had sealed by the time of the operation. A cholecystectomy was performed and a surgical drain was placed in the gallbladder fossa prior to closing.

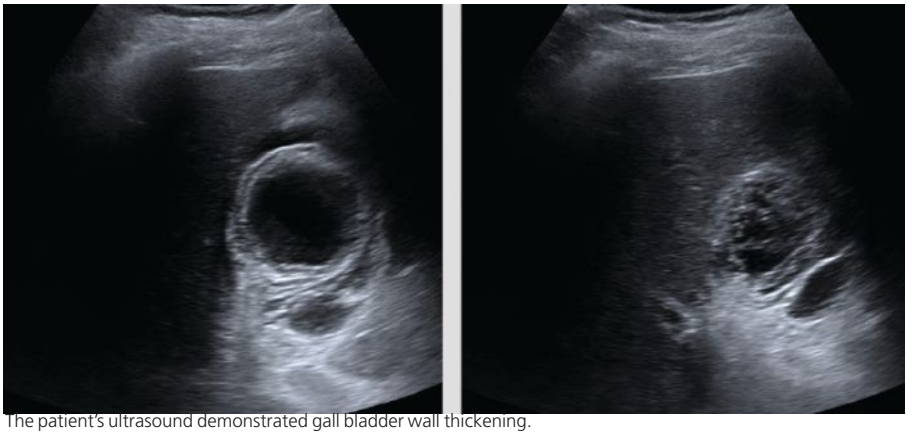
The patient was admitted to a general surgical floor post-operatively and had an uneventful recovery. The patient was advanced to a regular diet and was ambulating. He was given a three-day course of meropenem during his admission. His surgical drain output was serosanguinous and removed without incident. He was discharged three days after his surgery.

On pathologic review, the gallbladder was noted to have a thin, 1mm necrotic wall with intramural bile plugs and foreign body embolization.

At one-month follow-up, the patient was doing well from a surgical standpoint but continued to complain of mild right upper quadrant discomfort. Concurrent evaluation by gastroenterology revealed a recurrent HCC which was thought to be the cause of the pain. Repeat imaging two months later revealed that the patient had embolized bilateral right and left hepatic arteries requiring an attempted portal venous approach to repeat TACE, which ultimately failed. He decided to continue care at an outside system, eventually elected hospice care, and passed away 10 months later.

FIGURE 1

Abdominal Ultrasound Images



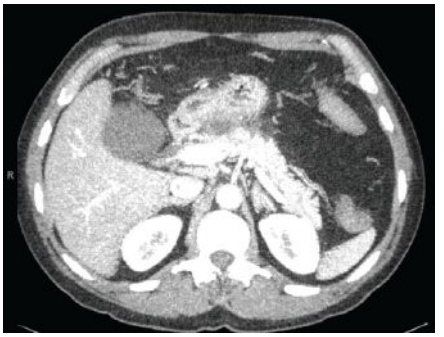
The patient's ultrasound demonstrated gall bladder wall thickening.

Discussion

This is a rare case of gangrenous cholecystitis with perforation following a TACE procedure. The patient had mild abdominal pain following his procedure, thought to be from a mild case of pancreatitis, a known, but uncommon complication of the TACE procedure.[10-12] In addition to the presumed ischemic pancreatitis, the patient was also found to have a necrotic, perforated gallbladder. The patient underwent a laparoscopic cholecystectomy, which was converted to an open cholecystectomy.

FIGURE 2

CT Image



The TACE procedure has a relatively low incidence of complications. A prospective study enrolling 8,510 patients had a complication rate of 5% and a mortality rate of 0.5%.[13] However, other studies report varying incidences of complications. A recent study of 2,863 patients at two medical centers estimated major complications for TACE at about 2%.[14] This study, however, demonstrated a high mortality rate of patients with major complications at 16.7%. Ischemic complications from non-target embolization are estimated to have a rate of about 5% in patients who have underwent hepatic embolization.[15] Acute cholecystitis after TACE is thought to be caused by ischemia from non-target embolization. Studies demonstrate a wide range of cholecystitis after TACE, at 0.3-10%, often reflecting the selectivity of the embolization.[15-21] However, Shah et al. estimated non-target embolization of the cystic artery in 16% of patients after TACE, but found that these patients were rarely symptomatic. [21] Most management of post-TACE cholecystitis have been managed conservatively [15,22,23] or with cholecystostomy tube [21] with the rare need for surgical intervention.

This case of perforated gangrenous cholecystitis is unique because of its severity and rarity in modern practice. Two previous brief reports on this topic have been published. In 1992, Simons et al. performed bland embolization though the proper hepatic artery for a metastatic carcinoid tumor; 8 days later, the patient

returned with non-perforated gangrenous cholecystitis.[24] In 1986, Sata et al. also performed bland embolization for HCC via the proper hepatic artery with two patients returning in two and four weeks with perforated cholecystitis.[25] Since these reports, the ability to embolize more selectively and the technology behind embolization continues to improve.[5] Additionally, a recent study demonstrated that most patients who developed cholecystitis after TACE underwent right hepatic artery embolization.[23] The improved selectivity of embolization may account for a lack of data after the brief reports of gangrenous cholecystitis.[4,25]

Conclusion

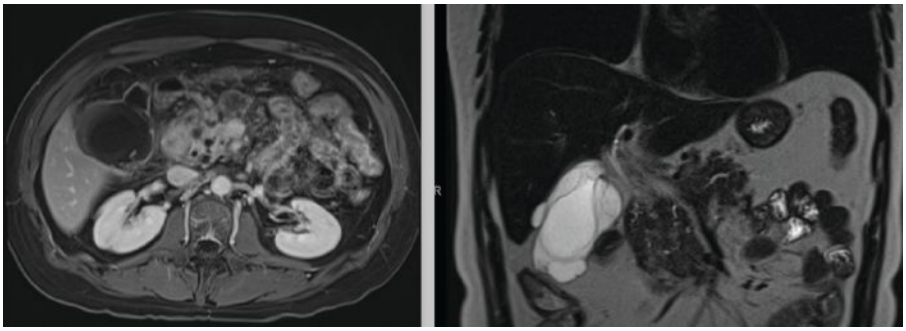
It is important to consider complications after TACE. While a patient may exhibit vague symptoms such as nausea, abdominal pain, and fatigue that may easily be attributed to post-embolization syndrome, there may be additional complications

Complications after TACE still occur despite experience, improved technology, and more selective embolization. While most reported cases of cholecystitis after TACE may have been successfully treated conservatively, there are rare instances of more severe disease, such as this case of gangrenous, perforated cholecystitis after TACE, which required surgical source control. **MM**

Steven J. Skube, MD is a general surgery resident at the University of Minnesota. Christopher J Tignanelli, MD, and Melissa E Brunsvold, MD, are attending surgeons at the University of Minnesota.

FIGURE 3

MRI Images



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2019 submissions

More than 30 students, residents and fellows submitted abstracts and case studies to *Minnesota Medicine*. Nine of those considered of exceptional quality—although quality overall was very good—were published in the September/October and November/December issues of *Minnesota Medicine*. The remaining four are published in this issue.

Physician reviewers 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.

We thank our reviewers: Devon Callahan, MD; Siu-Hin Wan, MD; Zeke McKinney, MD, MHI, MPH; and Barbara Yawn, MD. Callahan and Wan are members of the *Minnesota Medicine* Advisory Board; Yawn, now retired, is a former member. McKinney is chief medical editor of *Minnesota Medicine*.

When you can't blame the chemo: an emergent case of acute kidney injury

BY KATHRYN DEL VALLE AND MELTIADY ISSA

A 65-year-old man was admitted overnight from the Emergency Department to a hospitalist service with oliguric acute kidney injury and abdominal pain. Past medical history includes a recently diagnosed metastatic melanoma. He had a very large tumor burden throughout the liver and abdomen and had not yet undergone any treatment. Physical examination showed a slightly distended abdomen with mild generalized tenderness to deep palpation. Laboratory evaluation revealed a creatinine of 3.1, BUN 69, potassium 5.6, and calcium 8. He had no prior history of kidney disease. Urinalysis with urine electrolytes was ordered, and IV hydration was started, but he continued to be oliguric. Labs 12 hours later showed a creatinine of 3.7, phosphorous 6.5, and uric acid 14.1. Rasburicase was started and nephrology was consulted. Unfortunately, his urine output did not respond to diuresis so urgent hemodialysis was begun. He was subsequently diagnosed with spontaneous tumor lysis syndrome secondary to widely metastatic melanoma. A week later, he continued to require dialysis support. Chemotherapeutic options were discussed with the patient and his family, but overall prognosis was extremely poor. In this context, he chose to prioritize quality of life and declined further dialysis or cancer-directed treatment. He died in the hospital a few days later.

Discussion

Tumor lysis syndrome (TLS) is an oncologic emergency frequently encountered in clinical practice.[1] It is most often seen with hematologic malignancies following cytotoxic chemotherapy initiation. More rarely it can be seen with solid tumors following chemotherapy, [2,3] or even spontaneously, as in this case. It should be suspected in patients with large tumor burden who develop acute renal failure. If TLS is not diagnosed within the first 12-24 hours, it may lead to permanent renal failure requiring dialysis, or even to death. It is helpful to use the Cairo-Bishop laboratory and clinical criteria as a guide when diagnosing TLS. These include the presence of at least two relevant electrolyte disturbances (hyperuricemia, hyperkalemia, hyperphosphatemia, hypocalcemia) in addition to creatinine 1.5 times the upper limit of normal and/or arrhythmia/seizure/sudden death.[4] Effective management consists of intensive hydration, treating electrolyte abnormalities, the use of rasburicase, and nephrology consultation.[5]

The diagnosis of TLS should be considered early in a patient with known malignancy, acute kidney injury, and major electrolyte derangements, even in the absence of a previous cytotoxic chemotherapy. **MM**

Kathryn del Valle is a resident in internal medicine at Mayo Clinic. Meltiady Issa, MD, MBA, is an internist at Mayo Clinic.

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Levamisole-induced leukocytoclastic vasculitis with negative PR3-ANCA and MPO-ANCA

BY RACHIT GUPTA

A 36-year-old Caucasian man presented with two days of intense testicular pain, sharp lower abdominal pain, diffuse joint pain, and multiple rashes over his thighs. The patient is a plumber and waded through dirty water several days prior to onset. Only his feet were exposed to this water, but no rashes were present on his feet. Patient denies any other symptoms including fever, diaphoresis, chills, vomiting, diarrhea, or dysuria.

Physical examination showed palpable purpuric skin lesions below the abdomen, with reproducible tenderness to palpation of his muscles diffusely. Lab studies were positive for mild leukocytosis (10.3), low albumin/globulin ratio (1.3), and mildly elevated AST. ESR, BMP, UA, CK, hemoglobin, platelet count were unremarkable. No etiology was identified, and patient was discharged on symptomatic therapies.

Further workup of a testicular ultrasound was unremarkable and lab studies were only positive for elevated CRP (32.3). CBC, CMP, ESR, CK were unremarkable. Importantly, MPO-IgG and PR3-IgG were negative. Punch biopsy was taken and patient was discharged on continued prednisone, fexofenadine, ibuprofen, and mometasone.

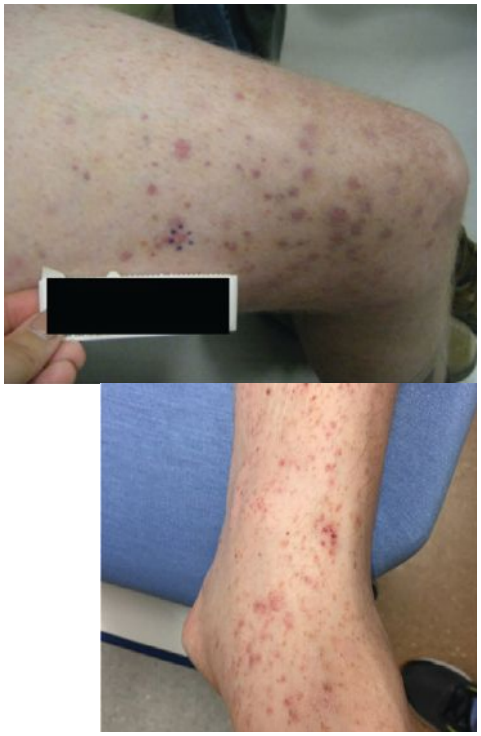

Figure 1. Physical examination illustrates palpable purpura diffusely throughout bilateral lower extremities.

Continued follow-up was significant for worsened symptoms, positive ANA at 1:160, doubled CRP, and a biopsy consistent with leukocytoclastic vasculitis. During follow-up visits, patient revealed cocaine use about once a month and reported that his last use was approximately four days before symptom onset. His symptoms resolve on continued prednisone and cocaine cessation.

Discussion

Levamisole is an anti-helminthic agent used to cut cocaine, present in almost 70% of cocaine in the USA.[1,2] Levamisole is recognized to cause two patterns of cutaneous vasculopathy-leukocytoclastic vasculitis and vasculopathy characterized by multiple thrombi in small vessels of the dermis.[3] Diagnostic criteria and confirmatory testing for LIV are limited aside from clinical judgment.

LIV has overwhelmingly been found to present with positive ANCA titers, either MPO-ANCA or PR3-ANCA. LIV most commonly presents with positive MPO-ANCA (87-100%) with PR3-ANCA being less common (18-54%).[4,5,6] One recent publication reported at least one ANCA antibody being present in almost 94% of patients, both PR3 and MPO ANCA being present in 43% of patients, and ANA being present in 52% of patient,[4] with a female predominance (n = 122, 63.5% Another study reports p-ANCA being present in 88% of patients with this condition.[6] There have been numerous case reports and series describing patients presenting with cutaneous vasculopathy that has been linked to the levamisole frequently found in cocaine.

Objective

The purpose of this study was to review all published case reports and series of patients reported with cutaneous vasculopathic findings of lemavisole induced vasculopathy (LIV).

Here, we present a case of a patient with MPO and PR3-ANCA negative LIV. The etiology is unable to be definitively confirmed due to patient's initial denial of illicit drug use. Regardless, it is unclear if a urine toxicology screen would have confirmed cocaine use during his initial visit in dermatology clinic. His presentation in dermatology clinic was approximately 10 days before reported use of cocaine. Levamisole is detectable within six hours of ingestion and cocaine is detectable for up to three days. This underscores the importance of obtaining a urine toxicology screen on initial presentation in patients with sudden onset systemic cutaneous symptoms with unclear etiology. This vignette also exemplifies the importance of understanding that while LIV overwhelm-

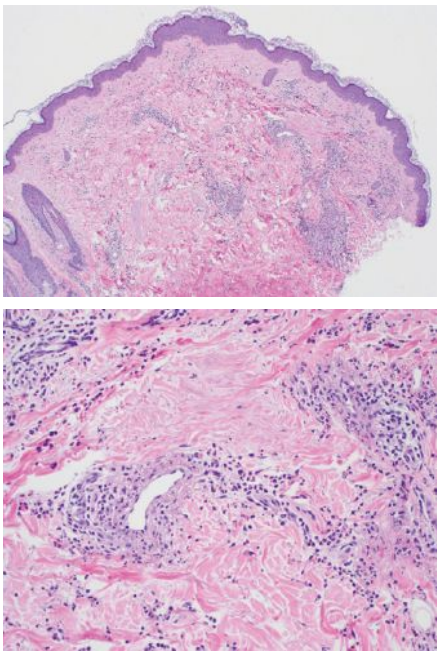

Figure 2. Punch biopsy shows perivascular mixed cell inflammation with neutrophils, eosinophils and leukocytoclastic debris, as well as fibrin deposition within the walls of superficial dermal small vessels.

ingly tends to present with positive p-ANCA and c-ANCA, this diagnosis is one of exclusion and still possible despite negative titers for these antibodies. **MM**

Rachit Gupta is a student at University of Minnesota Medical School.

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Risk of dysplastic progression in patients with Barrett's esophagus indefinite for dysplasia: a systematic review and meta-analysis

BY ANDREW HENN, MD

Barrett's esophagus (BE) is a premalignant condition with 0.68% annual incidence of progression to high grade dysplasia and/or esophageal adenocarcinoma (EAC). Rates of progression are known to increase with increasing degree of dysplasia (low grade dysplasia [LGD], high grade dysplasia [HGD]). The focus of our review is Barrett's esophagus-indefinite for dysplasia (BE-IND). It is defined as intestinal metaplasia with associated crypt dysplasia with either uninvolved, denuded or actively inflamed surface epithelium making definitive diagnosis of dysplasia difficult. BE-IND incidence of progression to EAC has not been well characterized. Prior studies have reported variable rates of progression to EAC from that equivalent to non-dysplastic Barrett's esophagus to rates similar to LGD. Our aim is to determine the rate of progression from BE-IND to HGD/EAC.

Methods

A comprehensive systematic review was performed in Embase, Cochrane Central Register for Controlled Trials, Medline, and Scopus from individual database inception until February 8, 2018 for studies assessing the risk of progression of BE-IND to HGD/EAC and LGD/HGD/EAC. All studies with BE-IND that evaluated progression to LGD or HGD/EAC with at least one year of follow up met inclusion criteria. Studies that evaluated surgical interventions and treatment arms of studies evaluating endoscopic eradication therapies were excluded. The ROBINS-I tool was used to assess quality.

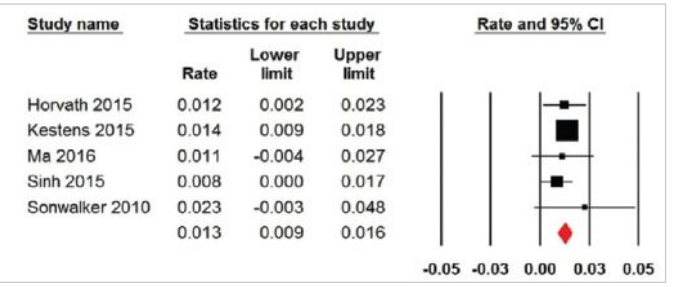

FIGURE 1: Barrett's Esophagus with Indefinite for Dysplasia Incident Rates of Progression to HGD/EAC (I^2=0%)

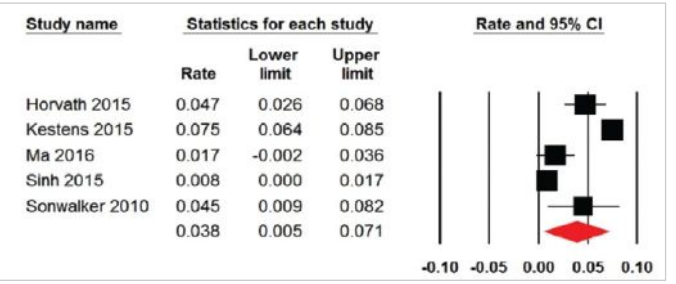

FIGURE 1: Barrett's Esophagus with Indefinite for Dysplasia Incident Rates of Progression to LGD/HGD/EAC (I^2=96%)

Results

Nine studies were identified reporting on 1,378 patients with Barrett's esophagus-indefinite for dysplasia with more than 4,146 patient-years follow-up and 273 patients showing progression. Five studies evaluated incidence data of 1,072 patients with BE-IND. These studies had 3,718 patient-years of follow up and 221 incident cases of progression. The pooled annual incidence rate of HGD/EAC and LGD/HGD/EAC in patients with BE-IND were 1.3 % (95% CI 0.9-1.6%, 5 studies) (figure 1) and 3.8% (95% CI 0.5-7.1%, 5 studies) (figure 2), respectively. No heterogeneity was present in studies evaluating progression to HGD/EAC (I2= 0%) however, significant heterogeneity was present considering rates of progression to LGD/HGD/EAC (I2= 96%). Explanations for this heterogeneity could include interobserver variation in pathology interpretation and study design.

Conclusions

The annual incidence of HGD/EAC and LGD/HGD/EAC in patients with Barrett's esophagus with indefinite for dysplasia are 1.3% and 3.8%, respectively. These find-

ings support the conclusion that BE-IND progression rates are truly greater than non-dysplastic BE. The risk of progression in patients with BE-IND is nearly twice that of rates seen in non-dysplastic BE. Our findings support current guideline recommended surveillance intervals in BE-IND similar to that for BE-LGD. **MM**

Andrew Henn, MD, is a resident in gastroenterology, University of Minnesota.

A novel means to successfully differentiate wide-complex tachycardias using mathematically-synthesized vectorcardiogram signals

BY ANTHONY KASHOU, MD; ADAM MAY, MD; CHRISTOPHER DESIMONE, MD, PHD; ABHISHEK DESHMUKH, MBBS; AND PETER NOSEWORTHY, MD

Background

The accurate differentiation of wide complex tachycardias (WCTs) into ventricular tachycardia (VT) or supraventricular wide complex tachycardia (SWCT) continues to be a problematic clinical undertaking. At present, conventional WCT differentiation methods require clinicians to visually examine and manually apply specific ECG criteria to render VT or SWCT diagnoses. Recent research has shown computerized measurements and novel computations derived from paired WCT and baseline ECGs may provide an effective means to automatically differentiate WCTs.

Objective

We sought to create a novel WCT differentiation method that may automatically be implemented by computerized ECG interpretation (CEI) software.

Methods

Standard ECG and mathematically-synthesized vectoracardiogram (VCG) measurements from 601 paired WCT (273 VT, 328 SWCT) and baseline ECGs were evaluated to generate a novel automated WCT differentiation method able to be integrated by CEI software.

Results

A logistic regression model (i.e. VCG-VT Model) composed of WCT QRS duration (ms) ($p < 0.001$), X-lead percent QRS amplitude change (%) ($p < 0.001$), Y-lead percent QRS amplitude change (%) ($p < 0.001$), Z-lead percent QRS amplitude change (%) ($p < 0.001$) yielded effective VT and SWCT differentiation (AUC 0.94). Overall accuracy, sensitivity and specificity of the VCG-VT Model were 88.3%, 85.7% and 89.3%, respectively. The VCG-VT Model correctly assigned the majority of VTs (53.4%) and SWCTs (56.4%) as having higher (≥90%) or lower (<10%) VT probability, respectively.

Conclusion

The VCG-VT Model is an example of how VCG measurements could be used to effectively distinguish VT and SWCT. Further study is needed to develop and evaluate newer WCT differentiation methods that solely utilize ECG and/or VCG measurements provided by CEI software. **MM**

Anthony Kashou, MD, is a resident in internal medicine; Adam May, MD, is a critical care cardiologist; Christopher DeSimone, MD, PhD, is a cardiologist; Abhishek Deshmukh, MBBS, is a cardiologist and electrophysiologist; and Peter Noseworthy, MD, is a cardiologist; all at Mayo Clinic.

DIONNE HART, MD

- Director, Care from the Hart in Rochester, Minneapolis and Chicago
- MMA member since 2003
- Hometown is Chicago. Graduated from the Univesity of Chicago. Residency in psychiatry at Mayo Clinic Graduate School of Medicine's Department of Psychiatry and Psychology. Has worked at Zumbro Valley Health Center in Rochester and Hennepin County Medical Center.
- Sons Brandon and Patrick, daughter Candice, daughter-in-law Ariel and granddaughter Liana.

Became a physician because …

When I was 5, I got a doctor's bag for Christmas. I dreamed about being a pediatrician and spent hours examining my dolls. After college, I became a social worker at a community mental health center in an impoverished part of Chicago. I witnessed psychiatric patients lined up in the hallways waiting to meet with a provider who completed a side-effect checklist, then dismissed them. I spoke with the psychiatrist, asking for more time for my clients, who wanted to discuss their illness more in depth during their appointment. He told me if I thought I could do better, I should go to medical school—so I did.

Greatest challenge facing medicine today …

Physicians were previously respected for not only their technical expertise but also their dedication to improving individual and population health. Today, there are so many competing voices and many are anti-science, or do not trust medical providers. We are now facing the resurgence of preventable diseases such as measles and polio because trust in physicians as a profession has greatly diminished. Physicians should face this challenge by increasing our efforts to provide health information to the public, maintaining ethical and sound principles when conducting research and being transparent when we falter.

Favorite fictional physician …

Dr. R. Quincy, a Los Angeles County medical examiner who routinely assisted the police in investigations. He was not only an excellent medical examiner who always determined the exact cause of death, he also partnered with members of the community to advocate on public health matters. Like Dr. Quincy, I try to not only expertly diagnose and treat to achieve recovery, but also to advocate for policy and legislative changes.

If I weren't a physician …

I would be a community social worker. I would still be involved in advocating for patients living with mental health disorders, and working to achieve mental health parity.

CALEB SCHULTZ, MD, MPH

- Staff anesthesiologist, Hennepin Healthcare
- MMA member since 2006
- Born in South Carolina, but considers himself mostly a Midwesterner. Graduated from Duke University, medical and public health school at University of Minnesota. Residency at Mayo Clinic. Has worked at the Minneapolis VA Medical Center and as faculty at University of Minnesota Medical School.
- Wife, Leslie King-Schultz, MD, MPH, is a pediatrician at Hennepin Healthcare. They have three children: Luke, 7; Adam, 4; and Lilly, 2.

Became a physician because …

My boring but honest answer is that I became a physician because of my fascination with medical science and my strong commitment to service. While there are myriad ways to see to the needs of others, practicing medicine offered me an intellectual path to directly caring for patients during some of their most vulnerable and scary moments.

Greatest challenge facing medicine today …

Physician burnout is a huge problem. Due to lack of control over work schedule, documentation demands and health insurance dictates, so many physicians feel as though they are just going through the motions, rushed and unable to emotionally engage in caring for their patients. For the sake of our patients, physicians need to more strongly consider collective action to redesign clinical practice in a way that restores the primacy of the physician-patient relationship in U.S. health care.

Favorite fictional physician …

I am a huge Star Wars fan and have even given talks at Convergence, the Midwest Sci-Fi convention, on biomedicine in Star Wars. The 2-1B medical droid in *Empire Strikes Back* is especially amazing as it not only provided intensive care to resuscitate Luke Skywalker after the brutal Wampa attack on Hoth but also surgically attached a fully functional mechanical hand to Luke after having it cut off during the Bespin duel with Darth Vader.

If I weren't a physician …

My MPH focus was on public health prevention policy and patient and public health advocacy is a passion of mine. If I weren't a physician, I would pursue a career in public policy and advocate for a stronger public health system.

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