THE JOURNAL OF THE MINNESOTA MEDICAL ASSOCIATION

MINNESOTA MEDICINE

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Medicine behind bars

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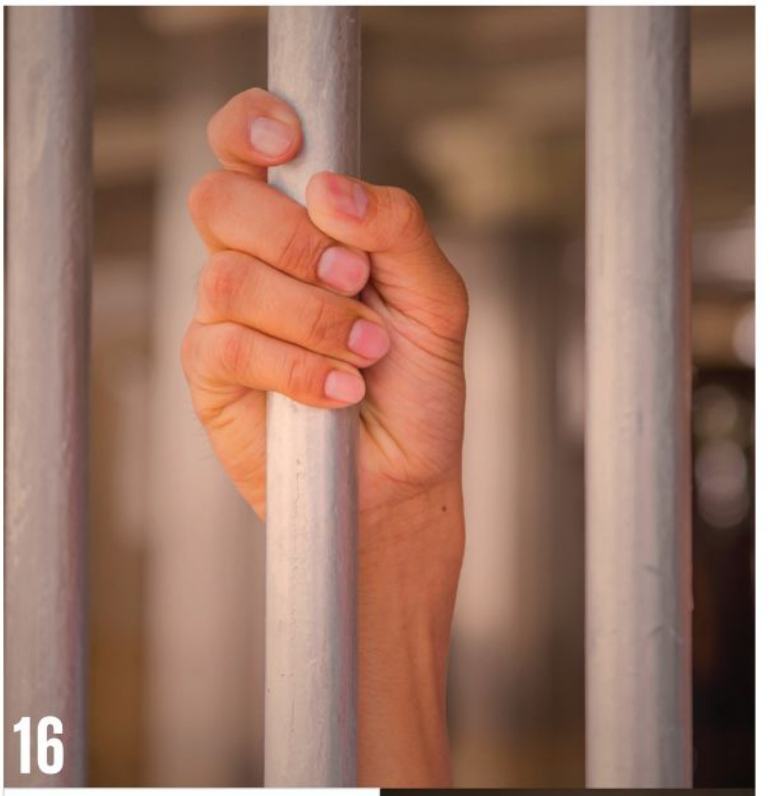

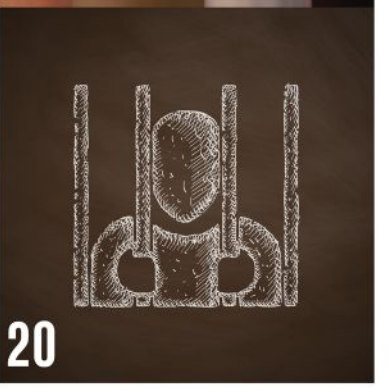

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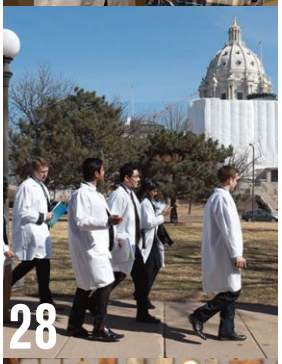

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PHOTO BY SCOTT WALKER

Charles R. Meyer, MD, Editor in Chief

Tough duty

Our annual editorial planning meeting is a flurry of ideas tossed around the table. Some end up on the cutting-room floor, while others take flight and become fully formed issues of the magazine. What the magazine eventually looks like can be quite different from the initial idea proposed at our meeting. Last year, we started talking about which specialties were the most difficult. Although we didn't settle on a Top 10 list, the idea of an issue devoted to "tough jobs" emerged. I immediately envisioned TV's *Dirty Jobs* host Mike Rowe gowning up for a 12-hour marathon operation or traveling to some remote Minnesota clinic held together by baling wire and a dedicated family doctor.

Despite the absence of Mike, we did find some tough, though not dirty, jobs. We found a coterie of physicians serving Minnesota's prison population with its daunting challenges of HIV infection, chemical abuse and mental health issues. We found foreign-born doctors filling the holes in rural health care delivery as they surmount language and cultural differences. Although not as dramatic as some of Mike's discoveries (think medical waste processor or fish squeezer), these jobs do seem like tough duty.

In a recent book, *Stories from the Shadows: Reflections of a Street Doctor*, author James J. O'Connell, MD, paints picture after picture of the tough job of treating homeless people at Boston's Health Care for the Homeless facilities. Battered by poverty, schizophrenia and drug abuse, O'Connell's patients engage in wild tirades, manipulate clinic staff and fail to show up for appointments. O'Connell describes them as having "lives with more questions than answers, lives shrouded in the mysteries of fate and genetics." Treating these patients seems like Sisyphus enshrined, everyday an uphill, losing struggle against medical problems made intractable by socioeconomic deprivation.

And Cindy Firkins Smith's account in this issue of her amazing crusade to secure prior authorization to get her patient the medication he needs is a reminder that maybe the days of most practitioners qualify for the "tough" label.

What emerges from all these stories is the reward that all of these physicians find in their work, regardless of how difficult their days may be. Foreign-born doctors discover a new home out on the prairie and are appreciated for the skills they bring to their communities. Prison doctors recognize the person behind the sociopath and provide him with quality medical care. James O'Connell acknowledges that the lives of his homeless patients are not "orderly or reasoned, and not the way lives are supposed to be. Many would challenge the patience of Job and make us wonder whether any loving God would allow such serendipity." Yet through the disillusionment and disappointment of imperfect approaches to unsolvable conundrums, O'Connell manages to "find richness and a fulfillment I can't quite explain." He writes: "I have always had an irrational fear of boredom and ennui, and these wonderfully erratic pilgrims have protected me from any hint of complacency or routine."

No specialty or practice situation has a monopoly on difficult problems—and perhaps difficult is not bad. All of these tales suggest that maybe "tough" is why we physicians went into medicine.

No specialty or practice situation has a monopoly on difficult problems.

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

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WELLS FARGO MEMBER LEADER'S CLUB HOME MORTGAGE

The **healer** *and the* **harp**

Heidi Street, MD, squares herself on the small black stool, leans the 47-string Lyon and Healy pedal harp onto her shoulder, positions her fingers on the strings, takes a deep breath and begins to play. The sounds of French composer Erik Satie's "Gymnopédie No. 1" begin to wash over the sunlit music room in her Zimmerman, Minnesota, home. "It's my go-to piece," she says of the composition. "It's what I play when I'm feeling stressed or down."

For Street, a family physician who practices at Courage Kenny Rehabilitation Institute in Golden Valley, playing the harp is her go-to activity after a busy day in clinic and a long drive home. "It's been one of the things that has helped me stay grounded in times of stress—that and my garden," she says, gesturing to the window of the music room, which overlooks her shed and snow-covered flower beds.

A longtime musician who studied piano and has played the flute since high school, Street took up the harp in 1997 after taking a job at Fairview Northland and moving from St. Paul to Zimmerman. "I had a 1-year-old and a 5-year-old at the time. With my practice and my husband's business, I needed something that was just for me," she recalls.

Street, who had always been intrigued by the instrument, contacted MacPhail Center for Music in Minneapolis about adult classes. "I love the sound," she says

PHOTO BY KATHRYN FORSS

Heidi Street, MD, at her 47-string pedal harp.

of the harp. "For me, that's the thing that's so grounding—and I wanted to know the mechanics of how it works. How do you find your way around it?"

Making the switch from flute, which had been her primary instrument, wasn't without its challenges. "I was used to looking at one staff for flute music. The harp uses four," she says. "So I had to learn to widen my visual field and figure out the hand position, which is a bit tricky." Eventually, she had to learn to use her feet as well as her hands, as playing a pedal harp requires both. The strings are like the white keys of a piano; the pedals make notes sharp or flat.

She also had to learn to tune the instrument and replace broken strings. Unlike a piano, which requires occasional tuning by a professional, the harp has to be tuned nearly every time it's played. "It's like tuning over half a piano," she says, referring to the number of strings. "It can take 20 minutes to tune before playing."

Street started learning on a small folk harp, a 34-string instrument with levers that change the pitch of each string. Five years later, after attending a harp convention in the Twin Cities, she moved up to a 40-string pedal harp; today, she mostly plays the 47-string instrument.

Street, who takes lessons at MacPhail every other week, says she gravitates toward classical and sacred music. Her favorite composers are Claude Debussy, Erik Satie and Carlos Salzedo. Her favorite performer: classical harpist Yolanda Kondonassis. Recently, though, she started working on jazz compositions by Bernard Andres. "But I haven't been as successful in polishing those pieces," she says, explaining that between her medical practice, commuting and caring for aging parents, it can be hard to find consistent practice time.

In addition to occasionally performing at church with her husband, who plays the flute, and her two grown daughters who play piano as well as trumpet and French horn, she has performed for residents of senior housing facilities and at Woodwinds Hospital in Woodbury.

As she has studied the harp, Street has learned about its connection with healing. "There are certain harmonics that they've found are potentially helpful for pain or calming," she says. In addition, many people with multiple sclerosis and other neurologic conditions do better when they play the harp. "The theory is that the vibrations of the harp resonate through your body, and when you play, not only can you hear it, but you feel it," she explains.

Although she hasn't brought her music to her patients at Courage Kenny, she hopes to one day use it therapeutically. In fact, she'd like to become a certified therapeutic harp practitioner. "I'm hoping that as I finish up my clinical years that I will carry this with me and be able to offer it to others," she says.— KIM KISER

Walking the talk

On a cold January morning, David Johnson, MD, laces up his running shoes and stands before a cluster of tables in the lower level of a community center in Plymouth. As people gather, he introduces himself and talks for 10 minutes about simple things you can do for your health, one of which is getting 150 minutes of aerobic exercise a week. Johnson and the group of about two dozen, most of whom are retirees, then head into the facility's fieldhouse to walk around the indoor track for the next 45 minutes.

Johnson, a family physician with Allina Health's Plymouth Clinic, is leading the Walk with a Doc program, an initiative designed to get people moving, increase their health literacy and connect them with physicians in a setting outside the clinic or hospital. As he rounds the track, participants catch up to him and ask questions about everything from the benefits of fish oil to preventing osteoporosis to the need for vitamin D—questions they may not have a chance to ask in the exam room.

Walk with a Doc (walkwithadoc.org) was created in 2005 by David Sabgir, MD, a Columbus, Ohio, cardiologist, after he realized that telling his patients to get more exercise wasn't enough to get them to change their habits. So he invited them to join him on his morning walk. Eventually, more than 100 people started showing up. Walk with a Doc became a full-fledged program in 2009 and now has chapters in 37 states and five countries. In Minnesota, Allina Health has chapters in Plymouth (through Abbott Northwestern – West Health) and Buffalo (Buffalo Hospital). Grand Itasca Clinic and Hospital in Grand Rapids also has one.

PHOTO COURTESY OF ALLINA HEALTH

Courtney Baechler, MD, (left) led the first Walk with a Doc event for Allina Health's Plymouth chapter.

Allina Health launched its Plymouth chapter in June 2014 at the urging of one of its physicians, Courtney Baechler, MD (she led the first walk). The walks take place the first Tuesday of the month in the fieldhouse in the winter and outside in the warmer months. In Buffalo, Walk with a Doc is held in conjunction with other community events. And in Grand Rapids, the walks take place the second Thursday of the month at the YMCA, where Grand Itasca has a clinic. "The whole idea is to give people an opportunity to meet a physician and ask questions and for me to be an example of the importance of getting moving," says family physician Toni Youngdahl, MD, who leads the walks.

Kaylee Arostegui, who coordinates the program for Allina Health in Plymouth, says they've had no trouble getting physicians to lead the monthly walks. "The physicians like it," she says, "and it's not a huge time commitment or a lot of work for them."

Youngdahl says members of the Grand Rapids community like it as well. Even during a recent blizzard, nine people showed up to walk with her on the Y's indoor track. And she's noticing that those walks are making a difference. "We have a group of four or five women in their 70s, and I've seen them develop stamina over time," she says. "This last walk, we had a woman bring her husband. It shows that we're getting a following." – KIM KISER

MEDICAL CANNABIS

APPLICATIONS AND EVIDENCE

LEGISLATION PASSED during the 2014 Minnesota legislative session created a new process allowing seriously ill Minnesotans to use medical cannabis to treat certain conditions. Currently, the Minnesota Department of Health is in the process of adding intractable pain as a qualifying condition for Minnesota's medical cannabis program, with implementation set to begin in 2016.

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Ilo Leppik, MD
Neurology

Angela Birnbaum, PhD
Pharmacology of Medical Cannabis

Panel Discussion to Also Include:
Kerstin L. Lappen, RN, MS, ACNS-BC, ACHPN, FPCN

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Learning objectives for this workshop:

- Describe the science underlying medical cannabis and the endocannabinoid system.
- Identify the clinical applications of medical cannabis with various patient populations including those with intractable pain.
- Identify health care provider roles and responsibilities under MN Statute.
- Describe barriers to the use of medical cannabis including myths, attitudes and fear of behavioral and psychological effects.

For more info, visit z.umn.edu/MedicalCannabis

HOSTED BY
The University of Minnesota Center for Spirituality & Healing

IN COLLABORATION WITH
The Minnesota Department of Health Office of Medical Cannabis

ACCREDITATION PROVIDED BY
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Contact hours are pending for: ANCC, ACCME (AMA PRA Category 1 Credit TM) and ACPE

Center for Spirituality & Healing

Mitchell Goldstein, MD, has created a foundation to help people with mounting medical bills and other needs.

PHOTO BY GRETTA GOLDSTEIN

FOR THE sake OF giving

Driving home from visits with friends and family in Minneapolis, Detroit Lakes surgeon Mitchell Goldstein, MD, would notice fliers for fund-raisers posted in the gas stations and convenience stores along the way: the spaghetti dinner for the family who lost their home to fire, the walk to raise money for the young mother with cancer, the car wash to help the parents of a boy who was injured in an accident. "I always gave money to those people, and I always felt I wanted to do more," he says. "So many people are in unfortunate situations."

Goldstein, who practices with Sanford Health, often met patients who were coping with similar situations. So he decided to make helping others his mission. He kicked around ways to do that. A song writer and guitar player, he first thought about making a CD and using the profits from its sale to help others. "But I'm not a rock star, and I'm not going to make millions of dollars doing that," he says.

A song writer and guitar player, Goldstein first thought about making a CD and using the profits from its sale to help others. "But I'm not a rock star, and I'm not going to make millions of dollars doing that," he says.

Instead, Goldstein decided to start a foundation and, last spring, established the nonprofit The JTG (Just to Give) Foundation (www.thejtgfoundation.org).

Goldstein's plan is to open restaurants and bagel shops and use the profits to support it. "I didn't want to become one of those nonprofits that every month sends out letters to people trying to get money," he says.

With the help of friends who know the restaurant business, an architect and an attorney, he created a business plan, with the idea of opening the first restaurant in Fargo. (He decided against Detroit Lakes because he didn't want to compete with restaurants there, some of which were owned by his patients.)

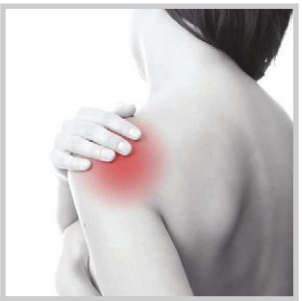
But finding seed money has been the challenge. "The relative numbers for starting a restaurant in Fargo were $3.5 million to $4 million. I don't have that," he says. He approached some of his friends and colleagues, thinking they might be willing to offer financial help. "I got about $250 from six of them," he says. "They all thought it was a good idea but didn't want to be the first to dive into it." Letters to Bill Gates and other well-known philanthropists yielded more contributions but not nearly enough.

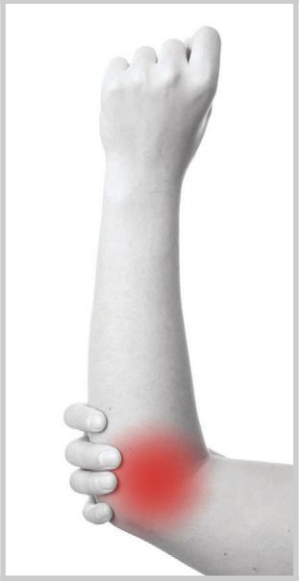
Once word of his plans began to spread through the Detroit Lakes and Fargo newspapers and social media, money started coming in from the community. In the last six months, Goldstein raised about $20,000.

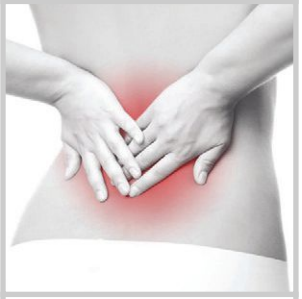
Although that's still a long way from the millions he needs, Goldstein continues to work toward starting a restaurant. And he is using some of the money in the foundation's coffers to help people he meets or hears about who are in need. The foundation recently helped the family of a woman being treated for cancer and the parents of a Detroit Lakes boy with complications from sepsis who needed intensive care in the Twin Cities. Both families had mounting bills associated with missed work and having to travel for treatment.

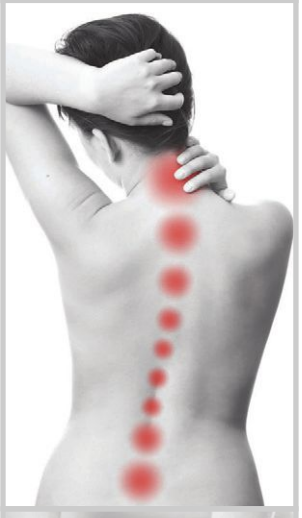
Goldstein has established a board for his foundation and plans to create a committee that will decide who will receive assistance. "But for now, if I can give a few hundred dollars here and there through the foundation, I will," he says. "Every little bit helps."

– KIM KISER









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Despite the challenges of living and practicing in rural Minnesota, many foreign-born physicians have become fixtures in their communities.

BY CARMEN PEOTA

The temperature has topped out at 0 and is slated to fall to -20 degrees overnight. The wind cuts at exposed cheeks and blows a dusting of snow across an empty highway. Gas pumps malfunction. Cars don't start. School is cancelled. It's the kind of winter day that makes it hard to recruit physicians to rural Minnesota.

The state's reputation for cold is only part of the reason its rural communities have trouble attracting doctors. The perception that the small-town doctor works longer hours, has fewer resources and less support, and earns less pay than his or her urban and suburban colleagues is another. Moreover, small towns simply may not be on the radar of people who trained at large academic medical centers in big cities. "The biggest challenge is bringing physicians to our communities to start with," says Richard A. Wehseler, MD, medical director of staff development for Affiliated Community Medical Centers (ACMC), which is centered in Willmar. For those who aren't familiar with the area, "it's a hard sell," he says.

These days, Wehseler and others find themselves making their pitch to physicians who were born and schooled in other countries. Often, those physicians are receptive because of a visa requirement to practice in an underserved area (30 physicians per year are allowed to waive the J-1 visa requirement to return to their home country after residency if they agree to work in certain areas of need in Minnesota for three years). Sometimes, they're interested because they see an opportunity to build the kind of life they want.

So who are these physicians who are taking jobs in Minnesota's small towns? What do they think about practicing far from where they started life? And does being from another country make a tough job even tougher?

Seasoned and smart

The first thing to know about these foreign-born and trained physicians is that they may be new to a certain town in Minnesota, but they're not newcomers to the United States. All have done a residency here and many have done fellowships and worked as well. As a result, they are generally acculturated to life and practice in the United States. And a move to a small town in Minnesota is not necessarily the biggest cultural leap they've ever made.

That was the case for nephrologist Carlos Franco Palacios, MD, who is originally from Paraguay and now works in Willmar. He came to the United States in 2004, did

Carlos Franco Palacios, MD, is originally from Paraguay. He has been practicing nephrology in Willmar since 2013.

a residency in internal medicine at Wayne State University in Detroit, served as chief resident and then went to Mayo Clinic, where he did a fellowship in nephrology followed by a yearlong transplant medicine fellowship. By the time he was offered a job at ACMC in 2013, Palacios had been in the United States for nearly 10 years.

He says his move from Detroit to Rochester was a bigger cultural leap than the move from Rochester to Willmar. By that time, he knew what medical practice and people were like in Minnesota, and he liked the quality of life here, including the outdoor activities (he swims, runs and bikes). "If you want to live a healthy lifestyle, it's good," he says of the Willmar area. "If you want to go to movies and try new restaurants, it's more challenging." The landscape even reminds him of Paraguay, which also has lakes and rivers, and corn and soybean fields.

It also was 10 years after he first immigrated to the United States when Amrit Singh, MD, joined the oncology group at Mayo Clinic in Mankato. Singh, who had practiced ophthalmology for many years in India, had to restart his medical career after he arrived in New York in 2001. While he prepped for exams, he supported his wife and two children initially by working in a Subway sandwich shop and later as an ophthalmic technician. During that time, he lost both of his parents to cancer. "That was a turning point," he says, explaining that it prompted his interest in hematology/oncology. He did an internal medicine residency at Brookdale University Hospital and Medical Center in Brooklyn, New York, a year as chief resident and then a fellowship. By the time he got the job offer from Mayo Clinic Mankato, it was 2011.

As Singh and Palacios demonstrate, most foreign-born physicians are well-educated individuals who have had to prove themselves repeatedly. Will Wilson, who supervises the J-1 visa waiver program in the state's Office of Rural Health and Primary Care, says many have nearly perfect scores on the United States Medical Licensing Examination, which all J-1 visa waiver applicants are required to pass. "We get physicians who score 257," he says, explaining that the range is usually between 140 and 260. "These are extraordinary people."

On top of their academic credentials, these physicians bring a global perspective. Most speak multiple languages, and many have lived in several countries. For example, Aby Philip, MD, who now works as a hematologist/oncologist at Essentia Health – St. Joseph's Medical Center in Brainerd, was born in southern India and grew up in Oman. He speaks his native language, Malayalam, as well as Hindi and English. Growing up, Palacios and his family lived in Panama, Costa Rica and Guatemala and interacted with people from Europe, North America and other parts of South America. "We were exposed to other cultures," he says.

Fitting in

Although they may be cosmopolitan, foreign-born physicians admit to some struggles as they try to fit into their communities.

Singh, who is very fluent in English, says he initially felt handicapped by his Indian accent. He says he had to make an extra effort to be understood at first, but that it's no longer an issue. (Palacios says speaking Spanish is an asset in Willmar, which has a large Hispanic population. When those patients hear Spanish, they are thrilled, he notes.)

Singh suspects that patients sometimes ask to see a physician other than him. But he thinks that's rare and is an issue faced by all physicians, whatever their race, language or ethnicity. "You can't stop that from happening," he says. He adds that no patients have overtly expressed concern about his cultural roots, although they're apparent. (As a Sikh, he wears a turban and has a beard.) "Actually, I don't think anybody has mentioned it, remarked or even showed surprise," he says.

Amrit Singh, MD, was an ophthalmologist in India before coming to the United States and restarting his career. He switched his specialty to hematology/oncology and now practices in Mankato.

For Kenyan-born Ivy Mwangi, MD, an internal medicine physician at Sanford Health's Worthington Clinic, looking different from others in her community has been an issue. She never thought much about it at Johns Hopkins, where she studied public health, and at the University of Maryland Medical Center, where she did her residency (both are in Baltimore). But in Worthington, "I'm the only person of

color in my yoga class and one of two in my church," she says. Mwangi says that awareness has subsided and that she has made good friends since moving to Minnesota.

Although she hasn't witnessed overt displays of prejudice, she's seen patients look surprised when she walks into the exam room or assume she's a nurse or tech rather than the doctor. Sometimes, there's an awkward moment when she has to explain who she is. "It's OK," she says, "but I'm always like, Why do we have to go there?"

Ivy Mwangi, MD, was born in Kenya. She now practices internal medicine in Worthington.

Pankaj Timsina, MD, who is from Nepal and practices family medicine in Detroit Lakes, says he's been well-accepted by patients. In fact, they've told him they appreciate that he takes time with them to explain things. He says he recognizes that some people in the community are not well-educated and may not know, for example, how to prevent a back injury or lose weight. "I like teaching," he says.

Timsina says the biggest difficulties for him have been social, although he was warmly welcomed by his colleagues at Essentia Health and the community. He says his first year in Detroit Lakes was the toughest, as he and his wife struggled with being far from family in Nepal and friends they had made during his residency in Minneapolis. They felt loneliest during major Hindu holidays. "There's no temple where we can go," he says, adding that they have learned to plan ahead so that they make sure they have someone to share the holidays with. They've also embraced North American traditions. They put up a Christmas tree, their daughter goes trick or treating on Halloween and they've hosted Super Bowl parties.

For many foreign-born physicians finding foods from home is another issue. Grocery stores in small towns rarely have an ethnic foods aisle, and the restaurants don't serve foods from their homeland. Timsina and his wife have to travel to Minneapolis to find certain foods. Mwangi has found she can order the Kenyan tea she craves on Amazon. Singh loads up the trunk of his car with food from Indian grocery stores when he's in the Twin Cities.

As for the weather, some like Philip embrace it (he's taken up snowmobiling), while others like Mwangi endure it ("Skiing and snowmobiling? I don't think I'm ready for them, yet"). Most, like Palacios, adjust ("You kind of get used to the colder weather. It doesn't mean you love it, but you get used to it," he says).

Aby Philip, MD, grew up in Oman. He is a hematologist/oncologist in Brainerd.

Small-town boosters

A surprising number of foreign-born physicians end up staying in rural Minnesota. "There are many perceptions that we get these people for three years, they do their obligation, and they bolt," says the Office of Rural Health and Primary Care's Wilson. "That's not the case. That's not what we're seeing." He says that as of 2013, about 57 percent of the 240 physicians who participated in the J-1 visa waiver program between 1996 and 2009 were still practicing in the state.

Philip, who has applied for a green card, appears to be on that long-term track. He has siblings and cousins living in the United States, and he now has a 2-year-old daughter. "Once you have kids, I don't think they want to go back. So I can see myself staying for a long time," he says.

Pankaj Timsina, MD, is from Nepal. A family physician, he now makes his home in Detroit Lakes.

According to ACMC's Wehseler, one of the things that makes it more likely that a foreign-born physician will stay in a community is if there are opportunities for a spouse. Visa policies don't make that easy. Wehseler cites the case of a physician at ACMC whose spouse is an attorney. "If he could get a work visa and establish a practice, as a family they'd be much more likely to stay long term," he says.

Foreign-born physicians actually might be some of rural medicine's biggest boosters. To Timsina, who worked with refugees in his native Nepal and was seeing 100 to 150 pa-

tients a day, the workload in Detroit Lakes seems reasonable. He's impressed with the fact that his patients have health insurance after living in a country where no one does and the first question during a medical encounter is, Can you pay? And he likes the slower pace of the small town, his short commute and the friendliness of the people. In fact, he and his wife thought Detroit Lakes was a better option than the Twin Cities for raising their daughter, who is now 4 years old.

Similarly, Singh raves about living and working in Mankato. He's happy to be a homeowner and likes having a short commute to work. He also likes the small size and congeniality of his group, and that he has colleagues at Mayo Rochester who are a phone call away. "Everywhere you go, there are pros and cons. But I'm content and happy with my work and working environment," he says. "And I didn't have a visa requirement. I just came here by choice and have no regrets." **MM**

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

The J-1 visa waiver

Foreign-born physicians who are in the United States with a J-1 visa can apply for a waiver that allows them to bypass a requirement to return to their home country for two years at the end of their training. Most who get the waiver are required to practice in an area of high need for three years. The Minnesota Department of Health's Office of Rural Health and Primary Care reviews the applications for the 30 waivers allotted to Minnesota each year.

Last year, Minnesota Sen. Amy Klobuchar and Rep. Tom Emmer along with Reps. Jerry Moran (R-Kansas), Susan Collins (R-Maine) and Heidi Heitkamp (D-North Dakota) introduced the Conrad State 30 and Physician Access Act, to expand the waiver program. Klobuchar's legislation would have made the Conrad 30 waiver program permanent (it was set to expire September 30, 2015) and allowed states to potentially increase the number of doctors in it.

That bill did not become law. However, Conrad 30 was extended until September 30, 2016, and Klobuchar plans to continue to work to improve the program and make it permanent.

As of November 30, 2015, the Minnesota Department of Health had received 37 waiver applications for fiscal year 2016 and was not accepting any more. It will begin accepting new applications on October 1, 2016. –C.P.

The inmate was clearly intelligent, though deeply ensnared in a web of psychotic delusion. A self-styled rapper and poet, he called himself X-Factor Psi 3. He was also, it turned out, one of the lucky ones. That's because he happened to end up at the Federal Medical Center (FMC) in Rochester, a facility for seriously ill inmates in the federal prison system.

Medicine behind bars

What it's like to work as a physician in **Minnesota's prisons**

BY RICH BRODERICK

Then chief of psychiatry Chris Sigurdson, MD, PhD, had made what might seem like an unusual request of the chief of psychology at Leavenworth: Please transfer a half-dozen prisoners you are holding in solitary confinement whom you suspect are there because of psychiatric conditions. Sigurdson thought that with long-term treatment, she might be able to get some of them out of isolation and into the general population.

The prisoner in question was one of those who was sent to the FMC. He had been convicted of bank robbery and had languished in solitary for several years because he couldn't handle being with other prisoners.

When he arrived in Rochester, he was very ill. "He talked in a word salad, but was pretty affable," Sigurdson recalls. So affable, in fact, that he voluntarily took the medications she prescribed.

Sigurdson met with him every week. And in time, the man started becoming aware of who and where he really was. He gradually transitioned to housing where he spent more time around people during the day. Six months after his arrival, he was transferred out of isolation altogether.

"He said to me, 'You remember how I didn't want to be out of lockout? Now I like being out. It's a lot better,'" Sigurdson recalls.

Sigurdson, who retired in 2008, says the man's transformation was the kind that can't happen with brief hospital stays and uncoordinated follow-up care. "It takes time and regular care, including both medication and therapy, to get people suffering from psychotic conditions to stabilize and reorganize their thinking, she says, noting that severely and persistently mentally ill people often don't get that in the community. "We had families who didn't want their kids released because they knew their child was safe and they were, too, and that they didn't trust their kid would get the help they needed outside," she says.

Having the time to offer patients long-term treatment and being certain about their whereabouts between visits were two factors that drew Sigurdson to work at the FMC after volunteering at the prison for a year while completing a fellowship at Mayo Clinic in 1993. "I also was attracted by the kind of patients I saw—inmates suffering from schizophrenia, bipolar disorder, head injuries, substance abuse, self-injurious behavior," she says, describing the prisoners at the FMC as "an incredibly rewarding population" to work with.

Accidental careers

Once thought of as an option for doctors who hadn't the skill or temperament to make it in other settings, correctional medicine has come into its own. The field now has its own professional organizations including the American College of Correctional Physicians (ACCP) (formerly the Society of Correctional Physicians), which was founded in 1992; the Correctional Medicine Institute, the ACCP's educational arm; and the National Commission on Correctional Health Care (NCCHC), which offers certification programs for health care workers employed in correctional settings. Although no one tracks the number of physicians who provide care in prisons and jails on a full-time, part-time or as-needed basis, interest appears to be growing. The NCCHC has a mailing list of several thousand, a number that has increased steadily since its inception.

For Sigurdson, practicing correctional medicine was a first choice. More typically, it's a path taken by doctors who are well along in their career. Todd Leonard, MD, was one of those. Leonard started out working as a family physician in the St. Paul suburbs. In 2006, he began to "dabble," as he puts it, in health care at the Sherburne County jail.

A friend, who happened to be the Sherburne County sheriff, asked Leonard to help at the facility. "I hesitantly agreed, but was very leery of the idea because I had no background whatsoever in correctional health care," Leonard recalls. Nonetheless, he found the environment stimulating. "You literally encounter patients from all walks of life and with all levels of need, from minor to chronic to critical."

When he first arrived at Sherburne, Leonard noticed that the system was not working very effectively. The jail, like other county facilities in the state, would hire local doctors and appoint one of them medical director. Payment for care might come from insurance companies or public funds, depending on the prisoner. He later learned that in some facilities, corrections officers were responsible for many of the basic services provided to prisoners, including delivering their medications; many times, there were variations from shift to shift. It was, Leonard observes, "a piecemeal approach."

Seeing a need for a more formalized system, Leonard spent a year studying whether there was a market for a company that offered contract medical services to county jails. In 2008, he founded MEnD Correctional Care, which recruits and trains medical staff to work in jails and oversees all aspects of care that can be appropriately managed within a correctional setting. MEnD currently provides services in 31 counties in Minnesota, Wisconsin and Iowa. It employs about 125 full- and part-time physicians, medical assistants, nurses, mental health specialists and administrators.

The Minnesota Department of Corrections (DOC) deploys more than 500 health care providers, including physicians, to the state's nine prisons and two prison camps, which house approximately 9,500 inmates. Most of those providers are DOC employees; others work for Centurion of Minnesota, a national firm that provides physicians and mid-level providers to state prison systems.

Renee Lipinski, vice president of operations for Centurion of Minnesota, says many of those who work for Centurion come from private practices or large health care systems. "When they come from that type of system, they are typically looking to get out of the churning of RVUs [relative value units] as well as the mandated patient contact hours," she says. Others see correctional medicine as a retirement career. "They aren't necessarily looking for a full-time job but for something that offers flexibility," she explains.

> People in prison "generally have not sought medical care or ongoing treatment for chronic conditions. Many haven't had access to care either."
>
> –DAVID PAULSON, MD

One theme heard among physicians working in corrections is that they want to help the underserved prison population. "I've seen some physicians entering the field as a calling, a new challenge," Leonard says.

A challenging population

Inmate patients do present their physicians with challenges, some of which are very different from those encountered in community settings. For one thing, people who end up in prison tend not to be health-conscious. "Before coming to prison, they generally have not sought medical care or ongoing treatment for chronic conditions," says David Paulson, MD, the DOC's medical director. "Many haven't had access to care, either."

In addition, Paulson says, the rate of communicable diseases, especially hepatitis C, is much higher within prison walls than outside, as is the incidence of HIV. Syphilis is so common that prisoners are regularly screened for it. The rate of end-stage renal failure is higher in prisoners than in the general population as well.

Women prisoners have their own issues. Emanuel Gaziano, MD, who joined Centurion of Minnesota as an OB/GYN a year ago after spending 26 years with Allina Health, is assigned to the Shakopee Correctional Facility for women. There, he sees about 18 to 20 patients a day, a third of whom are pregnant. Others might have bleeding disorders or urinary tract infections or need to have a biopsy or an IUD removed. Gaziano is able to treat most of his patients onsite. Women who are in labor or who cannot be treated at the prison are referred to St. Francis Regional Medical Center in Shakopee.

Mental health issues are pervasive, affecting both male and female inmates. According to the physicians interviewed for this story, an estimated 75 to 80 percent of all prisoners incarcerated in Minnesota's state, federal, and county facilities arrive with largely untreated mental health problems. The vast majority (an estimated 80 percent, according to our sources) of incoming prisoners are chemically dependent. Many are afflicted with a depressive, bipolar, schizophrenic or anxiety disorder. Others may have a personality disorder, poor impulse control, narcissistic delusions or anger management issues.

"We have a very high rate of narcissistic, antisocial and borderline personality disorders, as well as chemical dependency and abuse," Paulson says. "We also deal with a wide variety of maladaptive and self-injurious behaviors of a kind you would probably never see if you didn't work in a prison setting."

Practicing in a prison

In large prisons, the medical facilities are like a clinic, outpatient hospital and emergency department all rolled into one. The state prison in Stillwater, for example, can handle both scheduled appointments and emergencies, and has laboratory, imaging, dialysis and drug-dispensing facilities onsite. The medical staff includes psychiatrists, psychologists, other mental health clinicians and physical therapists. In those large facilities, care is interdisciplinary, involving medical and mental health practitioners as well as prison staff.

But what about safety? Do physicians feel safe providing care on the inside? Those interviewed for this article say they actually feel practicing in jails and prisons is as safe as, or even safer than, working in a community setting.

"It sounds odd, but I feel more at ease with my practice," says Lon Augdahl, MD, psychiatric director for Centurion of Minnesota. "The idea that prison work is dangerous—the opposite is true." Unlike on the outside, he says, "you don't have to worry if a patient who's coming to see you might have a gun or a knife. And security staff are available nearby at all times."

Paulson explains that prisoners routinely pass through metal detectors during movement and that all facilities are monitored by video. In addition, prison staff, including physicians, have access to radios and even body alarms. The DOC has strict rules about physically or verbally abusing staff. The consequences are immediate for any violators. "Unlike some medical environments in which patients are often not held accountable for their actions toward health care personnel, offenders are held accountable for their actions, and this accountability is generally swift," he says.

Paulson says verbal or physical aggression toward medical personnel is very rare in Minnesota prisons. In fact, he recalls only one incident in which an inmate assaulted a psychiatrist in a prison. That was 20 years ago. "We believe that the behavior of staff toward offenders is mirrored by the offenders in most circumstances," he says. "Staff are trained to treat offenders respectfully, and we find that this treatment is returned toward staff in most cases."

One of the things physicians who practice in state and federal prisons or who work for organizations such as MEnD tend to like is that insurance companies are not involved in decisions about care. That means no dealing with billing. In addition, a single drug formulary is used across the entire prison system, making prescribing more straightforward.

Another benefit of working in corrections: regular hours. Full-time physicians generally work five days a week, from about 8 a.m. to 4:30 p.m. No weekends. No holidays. Limited call duty. The average salary for doctors at county jails is a little less than that for primary care physicians working in community settings. But that gap is closing, according to Leonard. And at the state level, Lipinski says, on average, pay is competitive with what doctors earn in other settings. Physicians employed by Centurion are covered by the company's malpractice insurance and receive what she calls "a very comprehensive" package of benefits.

Forming relationships

Physicians working in prisons have the opportunity to get to know their patients well, especially if a patient is serving a long sentence. They also have more insight into their patients' lives and activities outside of the clinic.

Since prisoners are under 24-hour surveillance, physicians know whether a patient who comes in complaining of pain has been injured or is looking to get high. "We can have officers document our patients' function every half hour," says Michelle Skroch, RN, nursing director for MEnD. "We know if someone who comes in complaining of severe back pain ends up going to the gym later that day to do some weight lifting."

In addition, doctors know whether patients are complying with their advice. Augdahl, who joined Centurion in 2013, says inmates are monitored to make sure they take their medications and keep their appointments. "Outside, you don't know if patients are taking their meds. They don't always follow therapy recommendations, and you have no-shows," he explains.

In addition, he says, patients sober up in prison. And when they're sober, it gives him a chance to address underlying problems. "In fact, I've had some patients I saw in the community who have ended up coming to me in prison. That's given me a chance to see them in a new way because they come to me free of the effects of substance abuse."

He says most of his patients are genuinely grateful for the care they receive. "They'll tell me, 'I'm finally getting the mental health care I need, and I really appreciate it,'" he says.

Growing needs

Today, correctional medicine is on the minds of politicians and policymakers as well as physicians. That's in large part because the prison population is aging and needing care for chronic diseases and for catastrophic illnesses. According to a 2015 report by the U.S. Department of Justice, inmates 50 years of age and older were the fastest-growing segment of the prison population between 2009 and 2013, increasing 25 percent from 24,857 to 30,962. During that time, spending on medical care for inmates at the federal level grew by 32 percent from $62 million to $82 million.

"Absolutely we are seeing the effect of the 'greying' of the prison population," Centurion of Minnesota's Lipinski says. "And, yes, older, sicker patients require more time and effort from physicians than younger, healthier patients. And in a big population, that will inevitably result in the need for more staffing."

Leonard says Minnesota has had to allocate more resources for correctional health care in recent years. And he expects the need for funding—and physicians to serve the prison population—will only grow. "That's not going to change," he says, "at least for the foreseeable future." **MM**

Rich Broderick is a Twin Cities freelance writer.

Stillwater prison

A physician reflects on his creative management of critically ill prisoners.

BY A. STUART HANSON, MD

When Frank MacDonald, MD, chief of pulmonary medicine at the Minneapolis Veterans Hospital (VA), asked me to join him on a consultation at the Minnesota State Prison in Stillwater in 1970. I had no idea what was to come. A patient was identified as having tuberculosis, and they needed an expert to help decide what to do. I was a fellow in pulmonary medicine at the time, and Dr. MacDonald was my professor and mentor. He thought it might be a good experience for me. I had never been to a prison before.

After we passed through the front gate, then two more barred gates, Dr. MacDonald and I met the general practitioner who requested the consultation. We then saw the patient. The man was not severely ill, but we recommended treatment in the prison hospital in Rochester, where he could be safely isolated and closely observed. We also recommended that all inmates be skin-tested for TB. I was to follow up the next week.

Five days later, I got a call from the prison doctor. "We've got a problem. Five inmates have positive skin tests."

I told him to get chest X-rays, routine blood counts and serum transaminase tests on each of them, and that I would be there Thursday afternoon.

None of the inmates who tested positive had respiratory symptoms, and their chest X-rays were negative. All were started on standard therapy, which at the time was nine to 12 months of isoniazid (INH). I was concerned about the side effects of INH on the liver. Most TB specialists felt it was more important to prevent clinical tuberculosis with INH therapy than to worry about a mild drug-induced liver reaction. But there had been some deaths associated with INH therapy, so I did a liver transaminase test after a month of therapy. Three of the five patients had elevated transaminase levels in their blood.

At the VA, I had done liver biopsies on patients with suggestive evidence of hepatitis. But how would I treat incarcerated individuals? Could they give informed consent for an invasive procedure?

With written consent from the affected inmates and support from the warden, I did the biopsies and stopped or adjusted INH therapy. All recovered from their drug-induced hepatitis and none developed clinical tuberculosis.

I thought my job was done and that I would have my Thursday afternoons back. Then I got a call from the prison's general practitioner. He asked if I would be interested in becoming the prison internist, as they were having trouble managing inmates with diabetes and chest pain. Thus began five years of weekly visits to the prison.

Until then, prisoners who were having chest pain or in diabetic crisis were taken to Ramsey County Hospital in St. Paul. Some manipulated their insulin and diets in order to precipitate a crisis that required hospitalization. Others faked heart attacks, leading to emergency ambulance runs from the prison to St. Paul. During those hospitalizations some would try to escape. It seemed every few months another escape, successful or unsuccessful, was in the news. The issue was becoming a concern for state officials.

I found the Thursday afternoon trips to the prison a change of pace from working in a large Twin Cities teaching hospital. A short drive in the country and working with inmate patients proved to be enjoyable. But I was concerned about managing problems such as diabetic crises or chest pain safely and competently outside a hospital setting. There was also the question of how the prison population would respond to such a change in protocol. Could we prevent escape attempts?

I called the prison doctor and told him I wanted to start seeing all the diabetic inmates who took insulin and all the inmates who

had complained of chest pain in the last year. We devised a plan to treat inmates with chest pain and out-of-control diabetes at the prison. I met with several inmates who did nursing and laboratory testing. We talked about their willingness to get up at night to evaluate inmate complaints and to run lab tests and electrocardiograms (ECGs).

The first challenge came from a diabetic inmate with high blood sugar and impending diabetic acidosis, a life-threatening state of uncontrolled diabetes. To make matters worse, he presented late in the evening. No professionally trained medical personnel were on site.

Sy,* one of the inmates who worked in the prison medical lab, called me.

"What's his blood sugar?" I asked.

"Over 300. I need to dilute it again to get a better reading."

"Any ketone bodies to indicate acidosis?"

"The stick test is positive."

We had a bad case. The inmate must not have taken his insulin for a day or two. Over the phone, I ordered insulin, intravenous fluid and electrolytes, and a repeat blood sugar test in one hour.

I couldn't get back to sleep. Finally, I called the prison and reached Sy.

"I'm diluting the specimen again. It's over 300. The stick test is still positive for acid."

"How are his vital signs?"

"His heart rate is down to 120, blood pressure down to 130 over 85, and his respiratory rate is down to 25 a minute."

The blood tests were no better, but his vital signs suggested some response.

"Repeat the insulin dose, keep the fluid at the same rate, repeat the blood tests in two hours and call me."

When the phone rang, I was in a deep sleep. It took a few seconds to realize it was Sy calling.

"His blood sugar is now 275, heart rate is 100, blood pressure 100 over 60, breathing is 15, and he is sleeping."

"Keep the IV at the same rate and repeat the blood tests at 7 a.m.," I told him. "Use the sliding scale of insulin we set up last month. Give the results to the prison doctor who will be there about 8 a.m."

The inmate recovered and was back in his cell two or three days later, taking his usual dose of insulin and eating his usual diet. The prison physician managed the follow up, and I saw the patient in my Thursday afternoon clinic. We had passed the first test.

The prison physician and I also developed a plan to get ECGs and serial blood tests for cardiac muscle injury on any inmate presenting with chest pain suggesting a heart attack. We had baseline ECGs on all inmates with previous complaints of chest pain. We were ready.

Late one evening, the prison physician called to say an inmate had complained of severe chest pain and shortness of breath. His initial ECG was unchanged from base line, and Sy was running blood enzyme tests.

"Have Sy repeat the ECG in an hour and call me when he has the blood results."

When he called, the blood tests and vital signs were well within the normal limits. I asked him about the ECG.

"You know I am not trained to read ECGs. I have them laid out in front of me."

"Is the rhythm regular?"

"Yes, and the rate remains at 80 per minute."

"Any change in the V2 or V3 leads?"

"None that I can see."

"OK. Repeat the ECG and blood tests in six hours. If there is any change or you have any questions, call me. Otherwise, have the prison doctor see the man in the morning."

As suspected, the case turned out to be another false alarm, but we had treated it at the prison, rather than at the hospital in St. Paul.

So far, our change in operations was working.

There were a couple of more incidents, all at night. None required transfer from the prison facilities. Then the challenges stopped. The word was out and understood. A prisoner would be evaluated and treated satisfactorily in the prison infirmary. Unnecessary trips to a civilian hospital were no longer an option.

My practice at Stillwater prison came to an end in 1976 when other commitments made the weekly drive too much.

During that time, I learned a lot about prison life and the men who were paying their debts to society. In the 1970s, the vast majority of the 90 to 100 inmates at Stillwater were white and had common illnesses. They came from all circumstances and had varying levels of education. (One of my prison patients had been a prominent attorney.) However, many came from unstable families and had made poor choices. I was not aware of what crimes my prisoner patients had committed, and there were only four or five men I would not examine alone. They were true sociopaths.

Prisons have changed since then. Sentencing laws have become stricter. Drug abuse has become a greater problem, and the racial complexion of our prisons has changed. We incarcerate a greater percent of our population than any other developed country and, according to critics, punishment and protection of society take precedent over rehabilitation. Those observations beg me to ask: Are our judicial and penal systems meeting the needs of society? Are they preparing inmates to lead productive lives?

I believe we have made some serious public policy mistakes. Our violence rates are high, people of color do not trust law enforcement, and the privatization of prisons has created a self-serving industry. As a society, we can do better. **MM**

A. Stuart Hanson is a retired pulmonologist.

* Not his real name

My prior authorization nightmare

One physician's continued fight to get her patient the medication he needs.

BY CINDY FIRKINS SMITH, MD

For the past three years, I have been caring for Robert Fredrickson, who has cicatricial pemphigoid, an autoimmune bullous disease that results in blisters and erosions on mucous membranes. Multiple parts of his body are involved, with the most debilitating manifestations involving his conjunctiva and oral mucosa.

When I first saw him, Mr. Fredrickson already had conjunctival scarring and tethering between the conjunctiva and cornea, resulting in restricted range of motion of his eyes and double vision. Continued blisters and erosions placed him at risk for blindness. He couldn't eat without tearing the erosions in his mouth, which caused him tremendous pain. We discussed his situation and chose the medications we felt were best for his disease and safest for him. We ultimately gained control of his condition with a combination of mycophenolate mofetil (MMF), dapsone and topical corticosteroids. He did beautifully … until he changed insurance plans.

Mr. Fredrickson was simply changing from one of his health insurer's offerings to another. He did his due diligence and found both plans' formularies included his medications. What he had no way of knowing was that under his new plan MMF required prior authorization (PA).

When Mr. Fredrickson's insurance company first refused to cover his MMF, I completed the PA. It was denied. I called to find out why. Twenty-three minutes and four transfers later, they told me MMF was not medically indicated for cicatricial pemphigoid.

They said MMF was used only to prevent solid organ transplant rejection and for nothing else. Not true, I countered, offering data on the use of this medicine for multiple autoimmune diseases. They said they would forward this information to the appropriate individual (I was told I could not speak with this person directly), and that I would have their decision within a week. I said this was unacceptable. Because he was running short of medicine, Mr. Fredrickson had cut his dose in half, which put him at risk for exacerbation. I was told they would expedite the process.

Within 24 hours, I had their response: Denied. This time, their rejection was based on the fact that MMF is not FDA-approved for cicatricial pemphigoid. No medicine is. As physicians know well, there are many diseases for which there are no FDA-approved medications or devices. It's simply not profitable for a manufacturer to seek FDA approval for a medication to treat a rare disease. That's why we frequently rely on the evidence and treat such diseases with medications used off-label.

I wrote a letter outlining my patient's history, explaining my rationale for using this drug and providing the evidence (including pertinent literature citations) to justify its use. I demanded an expedited review (within 72 hours) because I felt any delay put my patient at unacceptable risk. It took only 48 hours for them to respond. The answer was no.

The appeal decision was "unfavorable," they wrote, because the patient's "Medicare Part D plan is not required to cover MMF." Specifically, Medicare requires that a covered prescription drug be used for a "medically accepted indication" and the Medicare-approved compendia do not contain any citations to support the use of this drug for this condition. Furthermore, "medically accepted indications do not include uses in research or uses described in peer-reviewed medical literature." I tried to find the Medicare drug compendia—the bible of Medicare drug-decision making—online so I could determine what was allowed for my patient's diagnosis, but my search proved futile. So I took to the phone again.

Forty-six minutes and four transfers later, I was able to speak with a pharmacist (with a representative from the pharmacy benefit management company providing backup). I reviewed my patient's diagnosis, comorbidities, the medications we were using and why. The pharmacist could find no specific drug in the compendium for this disease. I had already tried all the other medications in a similar class. The pharmacy benefits rep said if my patient had a problem with his benefits package, he needed to submit a grievance to his insurer because they made the rules. If the PA people had no leeway in determining my patient's use of this prescription, why was I even speaking with them?

My patient and I planned to petition his insurance company. We also had 60 days to submit an appeal to an administrative law judge, which we would do if we needed to.

IN MARCH OF LAST YEAR, I attended an educational session on pemphigus and pemphigoid at the American Academy of Dermatology's annual meeting in San Francisco. I had the opportunity to query the moderator as well as other attendees about their experience with PA challenges in treating autoimmune blistering diseases. It turned out that their experiences were highly variable. Some were struggling with the PA process, while others were having no problem at all getting MMF for their patients. It seemed the "rules" of the Medicare compendia were not being universally applied. But no one in the room had yet faced the seemingly insurmountable roadblocks that my patient and I faced.

Soon after that, my patient brought in his insurance information for me to review. He delivered two booklets filled with overwhelming amounts of confusing information.

I obtained a PA resource from a dermatologist at the University of North Carolina in Chapel Hill who specializes in immunobullous diseases and using this as a guide, spent two and a half hours on a Sunday afternoon researching and writing the appeal to the administrative law judge on behalf of my patient. A University of Minnesota dermatologist with expertise in life-threatening skin diseases reviewed and vetted it. We submitted the appeal, with multiple journal references as supporting evidence.

In the meantime, my patient paid for his medication out of pocket. A local pharmacist researched multiple suppliers and found the least expensive source.

I conservatively estimated that my nursing, transcription, reception and administrative staff and pharmacist colleague had by that time invested at least nine hours. I had personally invested at least six trying to get this one medication authorized for this one patient.

PHOTO BY CHEE-WEE WONG

Cindy Firkins Smith, MD, with her patient, Robert Fredrickson.

If Mr. Fredrickson were to stop using MMF and had a flare that required hospitalization or if he switched to intravenous immunoglobulin (IVIg) or rituximab to control his symptoms, costs would quickly escalate. The short-sightedness was astounding.

BY SUMMER, I had completed everything I had been told I needed to in order for my patient to receive his much-needed medication, including the administrative law review petition. We had completed the process well in advance of the allotted 60 days and had waited more than 60 days for a response. I thought had done all I could. But had I?

With my patient's permission, I wrote letters sharing his struggles to state legislators, Gov. Mark Dayton, U.S. Rep. Colin Peterson, Sens. Amy Klobuchar and Al Franken and yes, even President Obama. Soon after, I received a call from a representative from Sen. Klobuchar's office who wanted to take up the issue for my patient. The senator's office called him directly for more information. As far as I know, they are still trying to drag this out of the mud.

My patient did get a letter from his insurance company stating that he should appeal his denial. We had tried to do that earlier and were stymied. My medical assistant called them again and was told that she had to work through Medicare prior authorization. What exactly did they think

we had been doing for three months? She called the PA number again for clarification and after spending a futile half hour hung up.

OUR BATTLE CULMINATED with a telephone hearing August 5 in which Mr. Fredrickson and I faced off against a pharmacist and physician representing the insurance company in front of Judge Michael Manheim, a U.S. administrative law judge from Miami.

> "MMF was being covered for other patients, by other insurance companies, in other areas of the country and for other diseases with no FDA- or Medicare compendia-approved indications. Why were they targeting Mr. Fredrickson?"

Mr. Fredrickson had the right to hire counsel to represent him, and if he didn't, he would forfeit the right to do so in the future. Hiring a lawyer would cost him a lot of money, and he had already spent a considerable sum for his MMF. He told the judge he would forgo the lawyer and, instead, had chosen me to represent him. I felt a lot like Bones when Captain Kirk tasked him with something beyond his training. "Damn it, Jim. I'm a doctor, not a lawyer." But this wasn't the least bit funny.

I argued that MMF was covered before Mr. Fredrickson changed plans; that it was an appropriate, scientifically sound, off-label medication for cicatricial pemphigoid; that Medicare and the insurance company were covering it in other parts of the country; and that the insurance company offered no alternatives. In fact, by their arguments, nothing was covered for Mr. Fredrickson

They argued that "both the FDA and Medicare compendia do not support the use of MMF in the treatment of cicatricial pemphigoid." When asked directly which alternative drug the plan would cover, they responded that they were "not in the business of directing what drugs should be used to treat the beneficiary's disease" and that "the plan could get into trouble for directing treatment." They gave no explanation for why MMF was covered in other parts of the country. When asked why MMF was previously covered but is no longer, they responded that "the plan was only responsible for providing proper notice of no longer covering MMF."

I honestly felt we had proved our case. But I was too optimistic. Judge Manheim asked me to provide more data, specifically to research three additional sources: American Hospital Formulary Service Drug Information, U.S. Pharmacopeia Drug Information and the DRUGDEX Information System on the off-label use of MMF for autoimmune and immunobullous disease.

These resources were not available at our community hospital and getting them online required a fairly significant subscription fee, so I enlisted the help of a librarian with the Allina Heath System's Library Services in Minneapolis. She supplied me with an article, "Gain a Solid Understanding of Compendia and Its Impact on Patient Access," which outlined just how opaque and confusing Medicare drug coverage criteria can be (*Formulary* 2012; 252-6). I found the following statement to be particularly compelling: "Although Medicare has provided fairly clear instructions on which indications or listings will be covered, it does not necessarily mean the information included in the actual Compendium is crystal clear. For example, compendia can sometimes be vague in their language often leading to subjective decision making."

My research proved fruitful. I found multiple sources supporting the off-label use of MMF for many diseases, including bullous pemphigoid, a relative of cicatricial pemphigoid. I spent a weekend researching and writing a supporting letter for my patient. I had to skip a family wedding to do so. On the following Monday, I submitted my findings to Judge Manheim with 30-plus pages of supporting data. We waited. The insurance company wanted a week to respond. So we waited some more.

On October 9, 10 months after the initial medication denial and two months after the hearing, Mr. Fredrickson and I received the judgement: The plan was required to extend authorization for MMF.

Mr. Fredrickson and I celebrated his victory. But within two weeks of the decision, we received notice from a Medicare appeals lawyer that MAXIMUS Federal Services, which assists government agencies in running their programs, planned to appeal the judge's decision to the Medicare Appeals Council. It was my understanding that the hearing in front of the administrative law judge was the final stop, but then I found out that if they don't like the ruling, their lawyers can appeal the decision to their Appeals Council. I was shocked and beyond frustrated.

ON DECEMBER 1, I received the appeal—all 102 pages of it. The appeals officer for MAXIMUS Federal Services made the same argument I had heard throughout the process: MMF is not FDA- or Medicare compendia-approved for the treatment of cicatricial pemphigoid and that "the ALJ's [administrative law judge's] decision undermines the objective standard created by Congress for determining a drug's medically accepted use as a condition for payment under Medicare Part D." In other words, according to strict interpretation of Medicare law, if a disease has no FDA-approved medication or treatment and is not included in the Medicare compendia as an appropriate treatment, it is not covered and the patient is doomed to suffer and/or die. I had until December 26 to reply.

I spent another eight hours reading, researching and writing. My argument remained the same. Medicine (and law)

are not black and white, and cannot be interpreted without room for the variation that exists in the world. MMF is an appropriate, evidence-based treatment for cicatricial pemphigoid. It is not economically viable for a drug company to do FDA trials to seek approval for its use for cicatricial pemphigoid; the disease is too rare and the medication relatively inexpensive. To use the argument that there is no FDA or Medicare compendia-approved treatment for it as justification for not treating a patient is unethical, immoral and cruel. Also, this legal interpretation was being applied selectively and capriciously: my patient had obtained his MMF before January 1, 2015, with no problem and the law had not changed on that date; his dapsone was also not FDA-approved for cicatricial pemphigoid and was being covered without challenge, MMF was being covered for other patients, by other insurance companies, in other areas of the country and for other diseases with no FDA- or Medicare compendia-approved indications. Why were they targeting Mr. Fredrickson?

Finally, I pointed out the immunological differences between bullous pemphioid (for which MMF is Medicare compendia-approved) and cicatricial pemphigoid and how it was often clinically, histologically and immunologically difficult, if not impossible, to separate these two diseases. I submitted my arguments just before Christmas.

THIS JOURNEY HAS TAKEN ITS TOLL on everyone involved. Mr. and Mrs. Fredrickson faced months of anxiety and insecurity. They lost sleep and sacrificed to pay for this drug. Local pharmacists gave up their very narrow margin to provide Mr. Fredrickson with the medication at cost. My staff committed hours to this cause, as did the librarian at Allina. I cancelled patient visits to attend the administrative law review and spent many hours researching and writing. Not one minute of this time was reimbursed. On average, a year's worth of MMF costs less than $1,500. One emergency room visit, hospitalization for cicatricial pemphigoid, or course of IVIg or rituximab would dwarf that. And how much is Mr. Fredrickson's vision worth?

I know that we need to control the cost of health care, and I try very hard to choose the most cost-effective medications for my patients. But when our patients are denied cost-effective medications for capricious reasons, it's time to enter the fray. This is a fight worth fighting. How many other people besides Mr. Fredrickson are not getting the medications they need? The goal of everyone in health care, including insurers, payers and the government, should be to ensure the health of the people we serve. **MM**

Cindy Firkins Smith is a dermatologist with Affiliated Community Medical Center in Willmar and an adjunct professor of dermatology at the University of Minnesota. On February 22, she learned that the Medicare Appeals Panel overturned the judge's decision. Because MMF is not FDA-approved for cicatricial pemphigoid, according to the law Medicare Part D is not required to pay for it. She writes: "This is a black-and-white interpretation of law written by lawmakers who don't understand medicine. It is a tragedy for my patient and, if extrapolated to other rare diseases and the off-label medications we use to treat them, a disaster for patient care."

Call for Entries

Minnesota Medicine's Annual Writing and Photo Contests

Write on!

Have a story about a patient who touched your heart, an experience that changed your perspective or a mentor who influenced your life that you want to share? Do you write poetry? Essays? Enter *Minnesota Medicine*'s Medical Musings writing contest.

DEADLINE:
May 2, 2016

Capture a moment.

Taken a photo that tells a story? Or reveals the beauty or drama of a place and time? Enter it in *Minnesota Medicine*'s photography contest.

DEADLINE:
May 9, 2016

The best submissions will be published in the July 2016 issue of *Minnesota Medicine*.

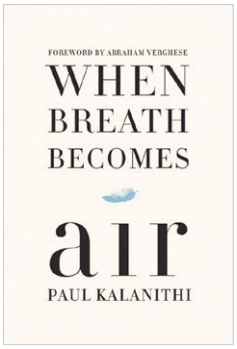
For more information or to enter go to:

www.minnesotamedicine.com/contests

Life, interrupted

A resident reflects on life and death in his final days.

REVIEW BY CHARLES R. MEYER, MD



When Breath Becomes Air, Paul Kalanithi, Random House, 2016

Medical training is a marathon of deferred gratification. Slogging through basic science facts, surviving the uncertainties of the clinical years, and tramping amidst rotations and residency are tolerable for many because they can see the finish—being able to use their hard-won knowledge to practice their art. Yet imagine stumbling at mile 26, never to get up again, never to use that education. That is Paul Kalanithi's story.

Kalanithi was a Stanford neurosurgery resident when he discovered he had widely metastatic lung cancer. Suddenly, his illustrious professional push to an almost-certain prestigious academic position was derailed. He embarked on a two-year odyssey of pain, uncertainty and wrenching revelations. An English major who once contemplated a writing career, Kalanithi started writing and composed his memoir of that journey, *When Breath Becomes Air.*

Kalanithi's first response to his diagnosis was that of a scientifically-trained physician. He analyzed the data and demanded facts from his oncologist. Asserting his medical credentials, Kalanithi shared in the decision of which chemotherapy to start. Yet he realized that being a patient who happened to be a doctor was much different than being a doctor: "As a doctor, I was an agent, a cause; as a patient, I was merely something to which things happened."

His tumor responded to the initial chemotherapy, raising the possibility that Kalanithi could return to his residency. Provoked by his oncologist's repeated insistence that he needed to decide what he valued, he mused about his decision to pursue medicine and how his view of neurosurgery and death had changed: "I had started in this career, in part, to pursue death—to grasp it, uncloak it and see it eye-to-eye, unblinking. Neurosurgery attracted me as much for its intertwining of brain and consciousness as for its intertwining of life and death. I had thought that a life spent in the space between the two would grant me not merely a stage for compassionate action but an elevation of my own being; getting as far away from petty materialism, from self-important trivia, getting right there, to the heart of the matter."

If *When Breath Becomes Air* dealt only with a doctor becoming a patient, it would stand in a long line of similar memoirs with physicians struggling with a loss of control and noticing the defects in the medical system. Where Kalanithi's story shines is in his lyrical meditations on life and death.

Encouraged by his clinical improvement, he returned to his residency and he and his wife decided to have a child, acknowledging that, despite his temporary improvement, his daughter would likely not get to know her dad. His return to the operating room was short-lived as the cancer roared back. He died when his daughter was 8 months old. His memoir went unfinished. A touching epilogue by his wife completes the tale of his final days and hours.

Few books have brought me to tears. But the last words Paul Kalanithi penned to his infant daughter did: "When you come to one of the many moments in life where you must give an account of yourself, provide a ledger of what you have been, and done, and meant to the world, do not, I pray, discount that you filled a dying man's days with a sated joy, a joy unknown to me in all my prior years, a joy that does not hunger for more and more but rests, satisfied. In this time, right now, that is an enormous thing." **MM**

Charles Meyer is editor in chief of *Minnesota Medicine.*

PHOTO BY KATHRYN FORSS

MMA legislative team to focus on three priorities

BY PHIL RAINES

In politics, time does not pass as it does in life. It can go incredibly fast (the leading candidate one day literally can be yesterday's news the next). Or it can go incredibly slow (think of the long slog to reforming Medicare provider payments).

Sometimes, we fall into an incredible time warp. That feels like what's happened now that the Minnesota Legislature is trying to reinstate the 2 percent provider tax, even though it hasn't yet expired and we have nearly a $2 billion budget surplus.

The MMA is working to not go back in time on this or other issues. With the 2016 Legislative session starting more than two months later than usual, legislative leaders will attempt to pack five months of work into approximately 10 weeks.

This year, the MMA is focusing on three major issues, although many more are likely to come up:

- **Prior Authorization Reform.** Patients have had their prescriptions denied solely because an insurer gets a bigger rebate from a rival drug manufacturer. As a result, they must pay for drugs out of pocket, or go through step therapy with a similar pharmaceutical. This can lead to poor patient outcomes. Meanwhile, the average physician's office spends nearly $83,000 per year on administrative issues like PA.
- **Provider Tax Repeal.** The 2 percent tax on health care services is set to expire at the end of 2019, but legislators are making plans to remove the sunset. The MMA has worked for more than 20 years to repeal this unfair tax and stop the government from using the funds it generates for non-health care purposes. Although we have existing law on our side, it will take a united effort to keep it on the books.
- **Vaccinations.** Minnesota leads the nation on many health indicators. However, its vaccination law is one of the weakest, allowing exemptions for parents with "conscientiously held beliefs." We know vaccinations work when everyone gets them and that we should protect the most vulnerable by requiring all children to receive them unless there are medical contraindications.

Over the next two and a half months, expect to hear from the MMA about its efforts and how you can help affect change during this session. The MMA is asking you to pay particular attention to Action Alerts, which are timely and effective ways for you to influence your legislators.

The MMA is also encouraging all members to come to its Day at the Capitol event on March 23, where you can learn how to press for change and have an opportunity to meet legislative leaders. If you aren't able to attend, send an email to praines@mnmed.org to set up your own personal day-on-the-hill through the Capitol Rounds program.

Finally, the MMA can set up District Dialogues to bring physicians together with their legislators in their home districts. These gatherings can take place at a clinic or a coffee shop. Let us know if you are willing to host one of these functions.

The MMA team is here to keep you informed of what is going on. We're confident that through these efforts we can make Minnesota the best state in the nation to practice medicine. **MM**

Phil Raines is the MMA's manager of grassroots and political engagement.

If you have a patient who has been adversely affected by prior authorization and is willing to tell their story publicly, please email Dan Hauser (dhauser@mnmed.org) or Dave Renner (drenner@mnmed.org).

News Briefs

Payment for telemedicine services changes

As of January 1, Minnesota Health Care Programs (Medical Assistance and MinnesotaCare) now cover "medically necessary services and consultation" by licensed health care providers through telemedicine as they would a service or consultation delivered in person. This is in accordance with the Minnesota Telemedicine Act, which became law last year.

Payment is allowed for real-time interactive audio and video telecommunications as well as the transmission of medical information to be reviewed at a later time by a physician or practitioner at a distant site.

To be reimbursed, physicians need to complete a Provider Assurance Payment Statement for Telemedicine, which can be found on the Department of Human Services website (http://mn.gov/dhs/general-public/publications-forms-resources/edocs/).

Next January, Prepaid Medical Assistance Program (PMAP) plans will be required to cover telemedicine services. Until that time, PMAP plans can choose whether to cover these services.

Commercial health insurance plans also will be required to cover telemedicine services starting January 1, 2017.

Last November, the MMA Board of Trustees approved the following recommendations brought forth by a Telehealth Task Force convened by the MMA in 2015:

- The MMA encourages and will participate in the creation of educational resources to support telehealth education for physicians at all stages of their career.
- The MMA will advocate for the inclusion of more comprehensive and embedded telehealth education in medical school and residency curricula.
- The MMA urges physicians to consider it an ongoing duty and opportunity to educate patients about the uses and possible benefits of telehealth.
- The MMA encourages physicians to utilize specialty-specific telehealth guidelines and to work with specialty societies to encourage the development of guidelines where there are none.
- The MMA will work to establish a telehealth resource website, which will include links to specialty-specific telehealth practice guidelines as they are developed as well as links to general information regarding telehealth security and privacy.
- The MMA, along with MN Community Measurement, will explore whether there is value in developing telehealth quality measures.
- The MMA encourages physician practices that are utilizing telehealth to adopt internal quality measures.
- The MMA will continue to support and encourage improved health information exchange capabilities that fully consider and address the evolving role of telehealth in health care.
- The MMA will continue to advocate for legislation that would align Minnesota's Health Record Act with HIPAA.
- The MMA will oppose the use of waivers of insurance network adequacy standards that seek to recognize telehealth services over existing and locally available in-person services.
- The MMA will support legislation to eliminate the telemedicine license from the Medical Practice Act. The license is no longer relevant given Minnesota's adoption of the interstate physician licensure compact.
- The MMA will work with the Minnesota Hospital Association and others to encourage Medicare to expand coverage of telehealth to include more services and eligible service sites.

(L-R): Cindy Firkins Smith, MD, former MMA president, Debra Peterson, MD, and Dennis Kelly, MMA Foundation CEO.

Litchfield doctor receives Physician Leadership Award

MMA member **Debra Peterson,** MD, received the MMA Foundation's prestigious Physician Leadership in Quality Award at a meeting of the Affiliated Community Medical Centers (ACMC) Board of Trustees in Willmar in December. The award recognizes a Minnesota physician who has demonstrated leadership in advancing quality and safety in health care. Peterson, medical director for quality and patient safety at ACMC and a practicing family physician at the ACMC Litchfield clinic, was honored for putting evidence-based medicine into practice by establishing recommendations, workflows and physician education to achieve high-quality outcomes.

Lake Superior Medical Society hands out eight awards

MMA Member **Kenneth Ripp**, MD, a family physician at the Raiter Clinic in Cloquet, recently received the Physician of the Year Award from the Lake Superior Medical Society (LSMS). The award is given in recognition of "consistently demonstrating qualities recognized as defining excellence in medical care delivery."

The LSMS also honored:

- **David Arvold, Jr.**, MD, St. Luke's Internal Medicine, who was given the Thomas A. Stolee: Exceptional Dedication to the Practice of Medicine Award for a lifetime of exceptional dedication to the practice of medicine.
- **Douglas Wendland**, MD, St. Luke's Occupational Health, who was awarded the John B. Sanford Community Service Award for his extensive volunteer activities outside of medicine. Wendland spent six months in Sierra Leone helping with the Ebola crisis.
- **George Apostolou**, MD, Duluth Internal Medicine Associates, who was awarded the Elizabeth C. Bagley Merit Award for his commitment to the medical profession and the LSMS.
- **John Wood**, MD, Duluth Family Medicine Clinic, who received the Educator Award, for excellence in teaching and education.
- **David Sproat**, MD, Duluth Internal Medicine Associates, who was awarded the President's Award for personal, professional and community contributions to the medical profession.
- **Timothy LaMaster**, MD, P.S. Rudie Medical Clinic, who was presented with the 2015 LSMS President's Gavel Plaque in appreciation of outstanding leadership and commitment to the LSMS.
- **Kenneth Dornfeld**, MD, Essentia Health Radiation Oncology, was awarded the Arthur Aufderheide Scientific Award for his extensive contributions to medical research.

On the calendar

Event	Date	Location
Day at the Capitol	March 23	DoubleTree by Hilton Hotel, St. Paul Downtown
2016 Annual Conference	Sept. 23-24	DoubleTree Park Place Hotel, St. Louis Park

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

Commissioner Ehlinger receives Shotwell Award

Minnesota Commissioner of Health **Edward Ehlinger**, MD, MSPH, received the 2015 Shotwell Award at the annual meeting of the Abbott Northwestern medical staff in January. The award is given annually to a Minnesotan who has made significant contributions in the field of health care. Ehlinger has spent the majority of his 35-year career advocating for public health and medicine, defining public health as "what we as a society do collectively to improve health for all."

High student debt? MMA partners with Credible to offer solution

In an effort to help its medical student members refinance their student loans, the MMA is partnering with Credible, a virtual marketplace that allows borrowers to receive and compare offers from multiple student loan refinancing lenders. As part of its relationship with the MMA, Credible also will provide educational webinars and materials about student loan management.

Call for nominations for MMA leadership

Nominations are now being accepted for president-elect, three Board of Trustee seats (Northwest Trustee district and two At-large) as well as AMA delegates and alternates. Names submitted will be reviewed by the Nomination Committee and made public in July. Please submit nominations to Shari Nelson at snelson@mnmed.org by May 20.

VIEWPOINT

Reinstating the provider tax is just a bad idea

Douglas Wood, MD
MMA Board Chair

The Legislature will soon meet for a so-called "short" session. But the discussions about the recommendations recently released by the Health Care Financing Task Force will likely be anything but brief.

This task force, convened as a result of a legislative mandate and comprised of representatives appointed by both the Legislature and the governor, was given a broad charge: to increase access to and improve the quality of health care in the state. Among the issues they considered were finding possible alternatives to MNsure, MinnesotaCare financing, delivery redesign and insurance market stability.

After significant work by numerous dedicated individuals, including MMA members, the task force outlined 33 recommendations. The group was required to vote in favor of or against the full set of recommendations, and not individual ones. Many of the recommendations are thoughtful and warrant legislative consideration.

Of particular concern to the MMA, however, is their call for a repeal of the scheduled end of the provider tax in 2019. The MMA has long opposed this tax. The decision by the 2011 Legislature—and signed by Governor Dayton—to sunset the tax in recognition of new funding available through the Affordable Care Act made sense. It still makes sense, despite continued siphoning of "dedicated" funds for new and unexpected uses.

The latest balance sheet for the Health Care Access Fund (HCAF), the fund into which provider tax revenue is deposited, shows that in 2017, it will have a surplus of $586 million. By 2019, the surplus is expected to exceed $1 billion.

If history is any guide, we should all be concerned about how that surplus money will be spent. Past diversion of HCAF funds probably explains why the task force included in its recommendations a call for more stringent guidelines for how that money is used. Unfortunately, all past attempts to restrict spending out of the fund have failed as new programs emerged or budget constraints dictated. Short of a constitutional amendment that dedicates revenue for a defined purpose, the Legislature will use its ability to manage state funds as it sees fit—regardless of earlier promises.

The provider tax has relative advantages to legislators: it is not visible to most taxpayers, it is linked to health care spending growth, and it generates a lot of money (approximately $600 million per year). But the tax is disproportionately paid for by the sick (those who use health care), adds to the cost of health care services, and is increasingly being used to pay for programs that have been financed by the General Fund.

Given that the state has a surplus in its General Fund of $1.8 billion and a growing surplus in the HCAF, I find it shocking that the Legislature would even consider reinstating a tax that was determined in a bipartisan manner to be no longer needed. The MMA is committed to ensuring that the provider tax stays repealed. We are looking at all options to make sure the Legislature follows through on its promise to let this tax die. Contact your legislators and tell them to maintain the repeal of the provider tax and oppose any attempt to bring it back. The provider tax has to go.

The Legislature will use its ability to manage state funds as it sees fit—regardless of earlier promises.

"Compassionate care?"
What are we getting into?

Minnesota can do better than legalize physician-assisted suicide.

BY CORY INGRAM, MD, MS, FAAHPM

The Minnesota Compassionate Care Act of 2015 (SF1880) opens a new dialogue on living and dying in Minnesota. SF1880, which was introduced last year and is likely to be heard in the Legislature again this year, would give terminally ill people with fewer than six months to live the opportunity to end their life by self-ingesting a lethal cocktail prescribed by a physician. Under the proposed law, two physicians would have to certify the person's diagnosis and prognosis and rule out reversible causes of their illness.

Supporters of this legislation cite self-determination and allowing dying persons a sense of control over their destiny as arguments in favor of it. They often consider assisted suicide a good alternative to dying in untreatable physical misery or committing a violent, lonely suicide. Opponents have plenty of evidence to suggest there are better choices. They also recognize that the threshold for receiving assistance to end one's life has been steadily lowered in places where it is legal and that vulnerable populations would be harmed by such legislation.[1] As a society, we have genuine differences of opinion about how to responsibly alleviate suffering. I believe we need to find better, more compassionate ways to help the terminally ill and others who are suffering than legalizing assisted suicide.

History of assisted suicide in the United States

In the United States, federal law prohibits euthanasia; however, assisted suicide is governed at the state level. In Minnesota, where it is illegal, assisting in a suicide carries a penalty of up to 15 years in prison and a fine of up to $30,000.

Five states have legalized physician-assisted suicide. Oregon, which enacted its law in 1997, was the first to do so. Subsequently, Washington, Montana,* Vermont and California have enacted laws allowing for physician-assisted suicide.[2] In each of those states, the criteria and processes are similar: In general, terminally ill residents 18 years of age and older, with a life expectancy of fewer than six months, who are capable of self-ingestion and are of sound mind can request assisted suicide. They must submit their request both verbally and in writing on two occasions at least 15 days apart to a physician, who then confirms their diagnosis and prognosis with a consulting physician. If approved, the patient is then provided with a lethal cocktail to ingest at a moment of his or her choosing after a waiting period. SF1880 is similar to the laws crafted in those states.[2]

Learning from experience: A slippery slope

The Netherlands has more than 40 years of experience with assisted suicide and euthanasia, as both have been practiced and tolerated since the 1970s.[3,4] They were formally legalized in 2002, with passage of the Termination of Life Request and Assisted Suicide Act.[5] Belgium also legalized assisted suicide and euthanasia in 2002.

These laws have led to undesirable and unintended consequences. In the Netherlands, deaths caused by euthanasia *tripled* during the first 10 years after it was legalized. Today, one in every 30 deaths in that country is from euthanasia.[5,6] Requests for physician assistance with suicide in the Netherlands have risen by 40 percent since 2010,[7] and the number of requests for life-ending practices increased 10 percent from 2013 to 2014. In Belgium, one out of every 22 deaths is from euthanasia, representing an increase from 1.9 percent to 4.6 percent between 2007 and 2013.[8] Those increases are largely because the threshold for receiving assistance to end one's life has been steadily lowered.[9] In countries and states that have legalized assisted suicide, 76 percent of requests are for nonphysical reasons.[5,10] In the Netherlands, there has been an active campaign to allow anyone over the age of 70 to end their life. The only criterion in addition to age is a belief that one's life is complete.[11,12] In the first year of this campaign, 6.8 percent of people requesting euthanasia at the Life-Ending Clinic, which was established in 2012 for people whose personal physician refused to end their life or assist them with suicide, died by euthanasia solely because they were tired of living.[5]

In Belgium, requests for euthanasia increased dramatically for people over age 80 from 2007 to 2013.[8] There also is a trend for elderly couples in the Netherlands who wish to die together to request euthanasia. This is known as spousal self-euthanasia. Neither spouse needs to be suffering from a life-threatening disease. These are people who simply wish to avoid the functional decline commonly associated with getting

* Montana legalized physician-assisted suicide through a special court ruling.

older.[13] Is old age, by definition, suffering? Does it justify termination of life?

Since 2012, depression and personality disorders have been the top diagnoses among people in Belgium with psychiatric illness who request euthanasia.[14] From 2012 to 2013, the number of people in the Netherlands dying from euthanasia for relief from psychiatric illness increased from 14 to 42.[7] In the Life-Ending Clinic in the Netherlands, euthanasia recipients cited the following as contributing to their reasons for wanting to end their lives: loneliness (49.1 percent); tiredness (83.9 percent), loss of strength (89.4 percent), loss of autonomy (81.4 percent) and loss of dignity (73.9 percent).[5] Eighty-one people with dementia died by euthanasia at the clinic in 2014, up from 43 in 2012.[7,15]

In Oregon, the three most frequently mentioned end-of-life concerns among those requesting physician-assisted suicide are loss of autonomy (91.4 percent), decreasing ability to participate in activities that make life enjoyable (86.7 percent) and loss of dignity (71.4 percent). Three percent of those in Oregon who end their lives choose to do so because of financial concerns.[10]

In addition to these troubling trends are many troubling cases. For example:

- Last March in the Netherlands, a 47-year-old woman with two young children received euthanasia for severe ringing in her ears. Since her death, the Dutch Euthanasia Review Committee has determined that the decision to grant her request was reckless because she had not been adequately evaluated and treatment options had not been explored.[7,16]
- In Belgium in 2013, 45-year-old twin brothers who were deaf were granted euthanasia for ensuing blindness. They did not want to become more dependent.[17]
- Also in Belgium, a 64-year-old woman received euthanasia for chronic depression following her retirement from teaching school. Her family was notified the following day.[18]

Even more chilling, the *Economist* reported that seriously ill people are being involuntarily euthanized in Belgian hospitals and that clinical teams are doing so without the patients' consent.[19]

Some health care professionals, in places where euthanasia and assisted suicide are practiced, are protesting the rapid changes that are occurring in their countries. For example, Dutch pharmacists have refused to dispense lethal medications, citing the ease with which some people are qualifying for euthanasia and concerns that practice standards have become too lax.[20] Additionally, one of the original architects of the Dutch law, Dr. Boudewijn Chabot, considers current practices in the Netherlands a derailment of the legislation. This is because of the steep increase in the number of people with psychiatric illnesses who are having their lives ended without an adequate evaluation of their condition.[21]

My prediction is that if SF1880 becomes law in Minnesota, we will, over time, see a similar loosening of our qualifying criteria for assisted suicide. I believe SF1880 is the first step down the slippery slope. It may take decades, but it will gradually become easier for people to qualify for assisted suicide and eventually euthanasia. Just as it has in other countries and states where euthanasia and assisted suicide are legal, the criterion of being terminal eventually will go away. The criterion of self-ingestion also will go away, as people with ALS and other neurodegenerative diseases will demand that they should be able to have someone end their life. The criterion of serious illness will go away, too. People who want to die will have the opportunity, almost whatever their reason.

No solution, just another problem

I don't question that suffering is real. It is also not my intent to compare the suffering of one individual to that of another. I acknowledge that suffering is a part of life. But I don't support assisted-suicide legislation for two reasons: 1) It doesn't help us provide better care to seriously ill and dying people; and 2) it will harm vulnerable Minnesotans.

Why it won't help us care for the seriously ill and dying

I am concerned that if we legalize assisted suicide, we as a society will cease to look for ways to prevent and treat suffering. I am convinced that we can do better than simply offering to end a person's life. We already can treat the most severe symptoms with interdisciplinary medical care. We are creating systems to make those treatments available to all patients near and far. That hospice and palliative care are not available to all is no justification for ending lives.

We are learning from data gathered from Oregon that most people choose to end their lives for nonphysical reasons. That suggests that building medical care to address whole-person suffering must be part of the task at hand. Society should demand comprehensive whole-person care, not life-ending practices.[22,23]

I'm concerned that if SF1880 becomes law, it will make it easier for people to qualify for lethal prescriptions rather than receive care from teams of well-trained specialists who can alleviate their suffering. I'm concerned that such a law would make it easier for insurance companies to refuse to pay for treatment and instead offer to pay for assisted-suicide prescriptions.[24]

SF1880 won't better educate health care professionals about how to comprehensively alleviate suffering, nor will it place more hands-on, caring staff in nursing homes, in home care organizations or in hospitals. Such a law won't do anything to make it affordable or feasible for families to care for their loved ones at home through the end of life. In fact, SF1880 addresses none of the Institute of Medicine's recommendations for improving living and dying in the United States.[25]

Why it will harm vulnerable Minnesotans

It is common to hear patients say they wish to die, rather than go on suffering. In a moment of true despair, death and nonexistence can seem better than living in their current state. The waning will to live and the desire to die is common to the

human experience and goes along with the ups and downs of living with serious illness.[26] My experience is that people who at one moment voice the desire to die often later say how grateful they are to still be alive once their symptoms are under control.

With assisted suicide as an option, vulnerable people with a fluctuating will to live may see suicide as their only option. Someone who receives a refusal letter from his insurer and can't get pain-relieving chemotherapy or radiation treatment, for example, may then seek approval for a lethal cocktail.[24,27] Patients who may be very sick but not yet eligible for hospice may instead turn to assisted suicide. Certainly, we might argue that SF1880 would afford them the liberty to choose to die; but some patients may view assisted suicide as the only choice they have. Keep in mind that 3 percent of patients in Oregon choose to end their lives by assisted suicide because of financial reasons.[24] Are these vulnerable individuals choosing freely? Or do they lack choice?

If I could give Minnesotans a law …

As a palliative medicine physician, I can't support a law that allows physicians to provide patients with a lethal prescription to end their life at a moment of their choosing. Nor can I support the idea of clinicians administering lethal doses of medications to patients. Rather than make SF1880 law, we need to make dignified, compassionate care a core value in our society. Dame Cicely Saunders, founder of the modern hospice movement, said: "You matter because you are you, and you matter through the end of your life." Every day, I see people with preventable and treatable suffering who would benefit from the services of well-trained clinical teams that can treat both their physical and nonphysical needs. Every day, I see vulnerable people agonizing over the financial burden illness places on their family during their last months of life. SF1880 won't help these people get good care; it will just enable them to take their life.

If I could give Minnesota a useful law, it would be one that would mandate education for health care professionals about the principles of palliative medicine so that every patient's suffering could be properly addressed. My law would make seamless, high-quality, comprehensive, interdisciplinary, around-the-clock, affordable care available in all settings. Don't give Minnesotans a law that will help them die. Give them a law that will help them live well until the end. **MM**

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Ten Rules for Antibiotic Prescribing

BY DAVID N. WILLIAMS, MBCHB, AND HEATHER M. RHODES, PHARMD, BCPS

Antibiotic use has come under increased scrutiny because of the emergence of multidrug-resistant organisms. Many have called for restricting use of antibiotics in humans and animals, finding strategies to reduce the spread of resistant organisms and development of new anti-infectives. The challenge for many clinicians is identifying when antibiotics are needed, which ones to use and how long to use them. This article offers practical advice for identifying when antibiotics are beneficial and curbing inappropriate use.

Antibiotic use has come under increased scrutiny because of the emergence of multidrug-resistant organisms and the continued shortage of new antibiotics, especially those that are active against Gram-negative rods.[1-3] An estimated 20% to 50% of antibiotics prescribed in acute care settings in the United States are either unnecessary or inappropriate. Such use contributes to the infection of millions of people in this country with antibiotic-resistant organisms each year, leading to 23,000 deaths.[2,4-9] As a result, there has been an outcry for restrictions on the use of antibiotics. There has also been a call for new strategies to reduce the spread of resistant organisms and development of new anti-infectives.

This article offers practical advice for appropriate prescribing of antibiotics and curbing inappropriate use.

1. Timing Matters

For some acute infections, antibiotic therapy should be initiated immediately, even before all the clinical information has been gathered. Examples include:

Acute bacterial meningitis. If bacterial meningitis is suspected, blood cultures should be collected before initiating antibiotic therapy. In situations where lumbar puncture to collect cerebrospinal fluid (CSF) for analysis and culture is deferred pending head imaging studies (eg, patients with known central nervous system disease, recent seizures, focal neurologic signs, altered mental consciousness and underlying immunosuppression), immediate empiric therapy (typically with ceftriaxone and vancomycin) is recommended, with the addition of ampicillin and/or other anti-infectives.[10] Delay in initiating therapy can lead to severe pneumococcal and meningococcal infections, which can cause rapid and overwhelming illness even in young, otherwise healthy individuals.

Severe sepsis and septic shock. In addition to immediate fluid resuscitation and blood pressure and airway management, it is essential to promptly begin broad-spectrum antibiotic therapy after obtaining key cultures.[11] For every hour initiation of appropriate therapy is delayed, the mortality rate increases by 7.6%.[12]

Fever in splenectomized patients. Patients who have been splenectomized or who are functionally asplenic (eg, those with sickle cell disease or with systemic lupus erythematosus) are highly susceptible to invasive and overwhelming infection with encapsulated organisms (predominantly *Streptococcus pneumoniae)*. In the event of an acute febrile illness, such patients should start treatment, typically with ceftriaxone, without delay.[13]

Fever in the neutropenic patient following chemotherapy. Patients who are likely to have prolonged (> seven days) and profound (<100 cells/mm3) neutropenia are at highest risk for infection. Antibiotics should be started immediately if the patient develops a temperature higher than 38.0°C on two occasions at least one hour apart or has a single temperature reading of 38.3°C. Typically, treatment is targeted to cover Gram-negative rod infection.[14]

2. One Lump or Two?

Combination antibiotic therapy should be used selectively because of its broader impact on a patient's microbiome and the increased possibility of drug-related side effects. Examples of when combination therapy may be warranted are outlined in Table 1.

3. Location, Location, Location

Knowing the presumptive anatomical site of infection is important in predicting the likely pathogen or pathogens. For example, organisms that typically cause community-acquired pneumonia and urinary tract infections are markedly different, and this informs empiric antibiotic choice. Knowing about the pharmacology of various drugs and how to treat infections in protected or "sanctuary" sites is important when selecting treatment (Table 2).

4. Know Your OAaTSs*

This rule emphasizes the importance of assessing risk factors for infectious exposures using the mnemonic "OAaTSs" (Occupation, Animal exposure, Activities, Travel, Sexual activity, "Shooting up")

*Modified after Dr. Ronald Schut, Infectious Diseases Division, Hennepin County Medical Center

(Table 3). However, asking the right questions may not always elicit reliable information because of embarrassment on the part of the patient (eg, failure to disclose intravenous drug use or sexual activity) or lapses in the patient's recall of specific exposures.

5. Use the Five Ds

Recent recommendations by the Centers for Medicare and Medicaid Services for preventing the transmission of multidrug-resistant organisms and promoting antibiotic stewardship include: 1) documenting the reason for antibiotic use; 2) a 48- to 72-hour review of the need for ongoing antibiotic therapy; and 3) prompts for when to switch from IV to oral medication.[15] Similar recommendations are included in the British National Health Services' "Start Smart—then Focus" antimicrobial stewardship toolkit.[16] Hennepin County Medical Center's version of this is a review of the "Five Ds" 72 hours after initiation of antibiotic therapy (when culture and sensitivity results are available). The Five Ds stand for:

Discontinuation. Do you still believe that the patient has an infection? If not, discontinue antibiotics.

TABLE 1

Examples of situations in which a combination of antibiotics may be indicated

Indication	Examples
Empiric therapy in critically ill patients*	Acute bacterial meningitis Severe sepsis/septic shock Intra-abdominal/pelvic infection
Concern for infection with a drug-resistant organism*	Recent hospitalization/antibiotic treatment; indwelling devices, etc. Suspected infection with *Pseudomonas aeruginosa* Recent international travel
For synergistic effect	Infective endocarditis caused by enterococcus faecalis* Necrotizing skin and soft-tissue infection caused by Group A streptococcus Tuberculosis—typically 4 drugs for 2 months and 2 drugs for 4 months

*After 48 to 72 hours, review microbiology and antibiotic susceptibility results and tailor treatment accordingly.

De-escalation. Do the microbiology results allow you to narrow the antibiotic spectrum?

Duration of therapy (see Rule 6).

Dosage form. Can you switch from an IV to an oral formulation based on your assessment of the patient's overall clinical progress and ability to tolerate oral intake? The availability of an oral formulation of an IV drug or a reasonable alternate (ideally with favorable bioavailability characteristics) is a prerequisite.

Discussion/Disposition. Can you begin to formulate a plan for the patient's

TABLE 2

Location of infection and related decision-making factors regarding antibiotics*

FACTOR	EXAMPLES
Pharmacology	
A) Low antibiotic levels at the site of infection	Avoid using: * moxifloxacin and tigecycline for UTI treatment * nitrofurantoin for pyelonephritis * first- and second-generation cephalosporins for bacterial meningitis
B) Drug inactivation at the site of infection	Avoid daptomycin for treatment of pneumonia (inactivated by lung surfactant)
Infection in protected or sanctuary sites resulting in low local tissue antibiotic levels	Acute infectious endocarditis – treat with bactericidal antibiotics. Organisms may persist in vegetations and other sites. Prostatitis – fluoroquinolones and trimethoprim are usually effective. Endophthalmitis – treat with systemic antibiotics plus direct local (intravitreal) antibiotic instillation. Abscesses – low pH and O2 tension locally impairs antibacterial effect, making incision, drainage and debridement key interventions. Bony sequestrum (poor blood supply) and infected prosthesis (biofilm) reduce antibiotic penetration except for some drugs like rifampin. Both usually require surgical removal/debridement for cure.

*The presumptive anatomic site of infection predicts the likely pathogen(s) and guides empiric therapy.

discharge? This should include a discussion about where the patient will be discharged (eg, home or a nursing facility) and whether he or she will need additional resources.

6. How Much Longer?

The optimal duration of antibiotic therapy has been studied for only a few infectious diseases, including tuberculosis and infective endocarditis. Recommendations on the duration of therapy for many common diseases are arbitrary. However, research does provide guidance with regard to the duration of antibiotic use for the following conditions:

"Uncomplicated cellulitis." Five days of treatment is as effective as 10 days.[17]

Community-acquired pneumonia. The most recent guideline recommends a minimum of five days of treatment as opposed to the seven or 14 days specified in earlier recommendations.[18] Antibiotic courses as short as three days have been studied but are not generally accepted.

Uncomplicated urinary tract infections in women 18 to 65 years of age. The options are: five days of nitrofurantoin (100mg BID is preferred) or three days of trimethoprim/sulfamethoxazole (160/800 mg BID) (avoid if the known resistance rate is >20% or if used to treat a UTI in the previous three months) or a single dose of fosfomycin (3g). Reserve fluoroquinolones and beta lactam antibiotics for certain situations (eg, resistance or drug allergies). [19]

Acute pyelonephritis. Studies have shown efficacy of treatment with ciprofloxacin (500 mg BID for seven days) or with levofloxacin (750 mg once daily for five days).

Hospital-acquired pneumonia. Outcomes following eight days of treatment are as good as those following 14 days of treatment (with the exception of infection caused by *Pseudomonas aeruginosa*).[20,21]

Intra-abdominal infections. Following adequate source control, outcomes after four days of therapy are as good as those after eight.[22]

In the absence of complicating factors, many infections can be treated with courses of antibiotics shorter than those used in the past. In terms of days of treatment, if five could become the new 10, the result would be a lower likelihood of the emergence of antibiotic-resistant bacteria, a reduced incidence of *Clostridium difficile* infection, fewer antibiotic-related side effects and lower overall cost. As with most guidelines, determining the duration of therapy depends on factors specific to the patient, clinical observation and careful follow up.

7. Be Careful What You Wish For (or Order)

Not all laboratory tests are created equal, and results have to be interpreted within the clinical context. Determining whether a bacterial isolate is a pathogen, a contaminant or a commensal requires clinical input. "Positive" culture results tend to result in treatment, even if it is unwarranted (eg, treating "positive" urine culture results in asymptomatic patients).[23] Serologic testing for Lyme disease can lead to over diagnosis and treatment of patients with nonspecific symptoms.

Results of laboratory tests are only as good as the quality of the specimen submitted for analysis and culture.[24] Therefore, it is important to remember that:

1) Collecting cultures at the time of clinical presentation and before initiating antibiotics will increase the likelihood of isolating a pathogen;

TABLE 3

Assessment of infectious exposures ("Know your OAaTSs")*

O	Occupation	Health care personnel have increased exposure risks (eg, Ebola hemorrhagic fever, tuberculosis, hepatitis B virus, etc.). Farmers, landscape workers, etc., have a higher risk of invasive fungal infection caused by aerosolization of fungi from working in soil.
A	Animal contact (humans, animals, insects)	Tick-borne infections – vary with seasonal and geographic factors, with Lyme disease being most common in the United States. Infections from animal bites (eg, cat bites may result in soft-tissue and bone infection caused by *Pasteurella multocida)*.
a	(Personal) activities	Hiking, soil excavation and cave exploration increase the risk of exposure to endemic fungi that may result in systemic infection and pneumonia. Consuming uncooked or contaminated food or drink. Risks include local (GI) and systemic infection (eg, Campylobacter, Salmonella, Vibrio, Brucella, etc.).
T	Travel	Check travel dates, countries/areas visited; exposure risks such as activities, food and drink consumed, etc. Malaria is the "cannot miss" diagnosis for travel to sub-Saharan Africa
S	Sexual activity	Risk of sexually transmitted diseases varies with type of sexual activity and whether precautions are taken.
s	"Shooting up"(IV drug abuse)	In addition to HIV, hepatitis B and hepatitis C, there is an increased risk of local and systemic staphylococcal infection.

*Modified after Ronald Schut, MD, Hennepin County Medical Center, Minneapolis, Minnesota.

2) The likelihood of isolating an organism from an aspirate of pus is much greater than isolating one from a swab;

3) The ability to isolate an organism from a blood culture improves when testing blood volumes of 10 mL or more;

4) Requests to culture expectorated sputum should be rejected if the specimen does not meet accepted criteria (>5 WBCs and <10 epithelial cells/HPF);

5) Testing stool for the presence of *Clostridium difficile* should only be done if the specimen is loose and "conforms to the collection container."

Microbiologic tests using techniques such as antigen detection and molecular methods can facilitate rapid identification of organisms and antibiotic susceptibilities from blood and other specimens. These advances improve patient outcomes and reduce costs by helping guide early and informed antibiotic treatment decisions.[25] Newer rapid point-of-care tests can, in a matter of hours, detect: 1) PBP2a allowing a MRSA diagnosis to be made or excluded; 2) *Streptococcus pneumoniae; Legionella pneumophila* Type 1; *Histoplasma capsulatum* by urinary antigen testing; and 3) *Cryptococcus*, HSV and enterovirus antigens in CSF. Multiplex PCR assays are now available to detect an array of pertinent pathogens.

8. Caveat Emptor (Buyer Beware)

Before prescribing an antibiotic, ask yourself the following questions:

1) Do the patient's symptoms suggest a bacterial or other treatable infection?

2) What is the patient's immunologic status?

3) Where was the infection likely acquired (a hospital or other health care facility or in the community)?

4) What is the clinical severity of the infection?

5) Does the patient have impaired renal or hepatic function?

6) Has the patient had possible infectious exposures listed in Rule 4 (Know your OAaTSs)?

7) Does the patient have a drug allergy? This requires careful review, as the term may be erroneously be used when a patient reports vomiting or feeling ill after the first antibiotic dose. Obviously, a patient with an immediate allergic reaction (airway obstruction or hypotension) should not receive the drug that caused it or a drug that is closely related.

8) Is the prescribed antibiotic known to be effective in treating the targeted infection?

9) What are the possible drug interactions? Is the drug readily available and what does it cost? What is the dose, route and frequency of administration? Does the patient have a history of antibiotic use during the preceding three months? What are the drug's toxicity profile/side effects?

Antibiotics account for nearly 20% of all emergency department visits for drug-related side effects. Trimethoprim-sulfamethoxazole and clindamycin are the most frequently implicated agents.[26] When prescribing an antibiotic, the patient should be informed of possible side effects and given written information and contact numbers to report concerns. Routine monitoring with laboratory tests tailored to the drug prescribed is important but frequently overlooked (eg, renal function in patients being treated with gentamicin and vancomycin or the hematologic and chemistry profiles of patients treated with prolonged or high doses of trimethoprim-sulfamethoxazole). A longer duration of therapy may result in more side effects. This is especially important for patients receiving linezolid (bone marrow suppression and neurotoxicity) and metronidazole (peripheral neuropathy).

9. Don't Just Do Something, Stand There!

Despite efforts to educate patients and clinicians about the possible consequences of antibiotic use, inappropriate prescribing still happens. Unfortunately, antibiotics continue to be prescribed for the common cold, acute pharyngitis, acute rhinosinusitis and acute bronchitis.

There are ways clinicians who are hesitant to prescribe can work with patients who ask that they "do something." Recent studies have highlighted the potential benefits of delayed prescribing strategies for uncomplicated acute respiratory infections in adults.[27-29] These include prescribing an antibiotic and advising the patient to take it only if symptoms worsen or persist, or prescribing an antibiotic but advising the patient not to take it for a few days to see if symptoms improve on their own. Although such strategies are imperfect, they can reduce antibiotic use without compromising patient satisfaction or impairing clinical outcomes.

Treatment of asymptomatic bacteriuria should be avoided, however, as it is associated with subsequent acute symptomatic infection with more resistant isolates.[30] On the other hand, treatment of asymptomatic bacteriuria during pregnancy and immediately prior to urologic instrumentation is advised in order to prevent subsequent pyelonephritis and systemic infection, respectively. Some experts also recommend treating asymptomatic bacteriuria in patients on high-dose immunosuppressives shortly after renal transplantation.

10. A Stitch in Time Saves Nine

Health care facilities have emphasized the importance of preventing infection including routine review of immunization protocols. Limiting the use of devices such as urethral and IV catheters and early removal of them are important to reducing infections. So is emphasizing the importance of hand washing before and after patient contact, and adherence to contact precautions and other strategies to prevent the transmission of infection.

Conclusion

Limiting the overuse and misuse of antibiotics remains the most sustainable solution to our problem of emerging resistant infections. Implementation of antimicrobial stewardship programs is vital and requires collaboration with colleagues in infection prevention, pharmacy, microbiology and information technology. Developing order sets for common infectious diseases and getting feedback on the utility of certain treatments, doing periodic audits of antibiotic use, working with pharmacists to review antibiotic prescriptions and reduce duplicative anti-

biotic coverage, and using the electronic health record to prompt orders for diagnostic tests and treatment at the point of care are all important to stopping or reducing the emergence of antibiotic-resistant organisms.

Many believe that we are at the dawn of a post-antibiotic era. Physicians and others who prescribe antibiotics play a big role in ensuring that era doesn't arrive. **MM**

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Avoiding Unintended Bias

Strategies for Providing More Equitable Health Care

BY MICHELLE VAN RYN, PHD, MPH

Research shows that unintentional bias on the part of physicians can influence the way they treat patients from certain racial and ethnic groups. Most physicians are unaware that they hold such biases, which can unknowingly contribute to inequalities in health care delivery. This article explains why a person's thoughts and behaviors may not align, and provides strategies for preventing implicit biases from interfering with patient care.

Over the past two decades, hundreds of studies have documented widespread inequalities in medical care. Although the reason for unequal care is multifaceted, physicians' behavior and decisions are known contributors.[1-8] Physicians' clinical decisions and the way they use guidelines and evidence-based practices have been shown to contribute to disparities in:

- Care for cardiovascular risk factors ranging from hypertension[9,10] to sleep disorders[11,12]
- Treatment of symptoms associated with coronary artery disease and severe cardiac events[6,13,14]
- Cancer screening, prevention, treatment and symptom management[15]
- Pediatric care, including asthma treatment[16,17]
- Assessment, treatment and referral for mental health services.[18]

Disparities also have been shown between patients of different ages, racial and ethic groups, and genders in receiving pain control.[19-22] The questions physicians ask during patient interviews and which tests they order can contribute to such disparities in care.[23-28]

Physicians often find it difficult to accept that unconscious biases may affect the care they provide because the notion is so inconsistent with their explicit (conscious) attitudes, motivations and intentions. Most physicians have genuinely egalitarian conscious beliefs and want to provide excellent care to all of their patients.[29] The apparent contradiction between what they consciously believe and what research shows they actually *do* can cause considerable cognitive dissonance—the uncomfortable feeling people get when holding two conflicting ideas simultaneously. Cognitive dissonance is so uncomfortable that we will go to great lengths to resolve it, often discounting or ignoring evidence that supports the lesser-preferred of our beliefs. When physicians reject evidence of unconscious bias, they miss an opportunity to improve the quality of care they provide, thus potentially perpetuating the delivery of unequal care. This article is intended to help physicians by 1) explaining why—despite their best intentions—they might behave in ways inconsistent with their conscious beliefs and 2) providing strategies to prevent deep-seated biases from negatively affecting the care they provide.

Why Our Thoughts and Behaviors May Not Align

The reason physicians may be consciously well-intentioned yet behave in biased ways is rooted in the fact that we do not think the way we think we think. The vast majority of scientists studying the mind agree that humans have at least two separate information-processing systems that operate simultaneously. Daniel Kahneman, the Nobel Prize-winning author of *Thinking, Fast and Slow*, dubbed these simply as System 1 and System 2.[30] We are primarily aware of System 2, which involves deliberative, reasoned, conscious and effortful thought. In contrast, System 1 often operates outside of our awareness, helping us navigate the millions of bits of information to which we are exposed at any one time by providing an unconscious framework for interpreting incoming information. For example, most people in North America

will automatically make the association between an apple and food. Furthermore, when we see an apple, we will automatically draw on stored information about apples, avoiding the need to dissect and study every apple we encounter. Although most of us believe System 2—conscious and reasoned thought—guides our behavior and understanding of the world, Kahneman points out that, "System 1 is really the one that is the more influential … it is steering System 2 to a very large extent."[30]

System 1 also guides us through our social interactions—and can sometimes lead us astray. For example, if white and Asian doctors are repeatedly exposed to blacks portrayed as criminals, violent or in other negative ways on television or in film, they may automatically and unconsciously associate black patients with threat and undesirable behavior. These unconscious expectations and attitudes, referred to as implicit biases, represent the "thumbprint of the culture on our minds"[31] and, as such, they can be very different from our conscious attitudes and motives.

How Bias Manifests in the Clinic

Implicit biases have the potential to influence us in unintentional but powerful ways. Implicit racial bias has been shown to influence physicians' clinical decision-making[3,32] in regard to patient referrals for thrombolysis[3] and post-operative pain control for children.[33] Furthermore, implicit biases have been shown to have complex and subtle effects on physician-patient interactions.[34] For example, physicians' level of implicit racial bias against blacks, as assessed by the Implicit Associations Test, have been found to be inversely associated with patient-centered behavior,[8,35,36] visit length,[35] warmth,[4] and positively associated with rapidity of speech[35,37] and verbal dominance during the encounter.[38] Studies showed black patients reported less respect for, confidence in, and trust in the advice of medical professionals who scored higher in implicit bias.[34,35] This distrust predicted lower levels of adherence to the physician's recommendations,[39] a finding consistent with other evidence that patients' perceptions of being judged, negatively perceived, stigmatized or discriminated against predict adherence [40-44] and their likelihood of seeking follow-up or preventive care.[38,45-52]

It is important to bear in mind that implicit bias is not unique to physicians or the health care industry. Examples of the pernicious effects of implicit racial and other biases exist in every sector of our society. For example, fictitious job applicants with identical resumes responding to 1,300 want ads got 50% more call-backs when they used a "white-sounding" name versus a "black-sounding" name.[53] Another found female musicians were significantly less likely than male musicians to be hired for orchestras during open auditions, but as or more likely to be hired when they auditioned from behind a curtain.[54] In yet another study, faculty members (both male and female) reviewing applications for a student lab manager position that were identical except for gender viewed the male applicants as more competent than the female applicants. They also were more likely to hire and mentor a male student than a female student and offer him a higher starting salary.[55]

Strategies for Providing More Equitable Care

Although our implicit biases can cause us to behave in ways that are inconsistent with our explicit motives, values and beliefs, they do not have to. There are strategies that can increase our likelihood of seeing patients in terms of their unique individual characteristics, as opposed to those of a social or cultural group of which they are a member. In a recent issue of *Minnesota Medicine,* editor in chief Charles Meyer, MD, described the challenge: "Equity in the exam room means treating each patient as if they were your most important patient, regardless of gender, sexual orientation, race, ethnicity or personal appearance." [56]

The massive body of evidence demonstrating the negative impact of implicit bias has prompted a number of additional studies identifying factors that can minimize it. The following are recommendations from those studies that have the strongest supporting evidence.

1. Put yourself in your patients' shoes. Numerous studies have found that *perspective-taking* reduces bias and inhibits the activation of unconscious stereotypes and prejudices.[34,38 ,57,58] Perspective-taking refers to imagining yourself in the other person's position; seeing things through his or her eyes. It is the cognitive component of empathy, and it can be learned and cultivated with practice. In addition to its documented benefits for reducing bias and stereotypes, provider empathy has been associated with increased patient satisfaction, adherence to physicians' recommendations, self-efficacy and perceptions of control; less emotional distress; and better outcomes.[59,60] Some physicians have highly developed perspective-taking skills. But even those who do may not routinely apply them during clinical encounters. Through daily practice with family, friends and colleagues these skills can improve over time and their use will become more automatic.

Steps you can take:

- Imagine yourself in the other person's shoes. Think of it as walking in their world or seeing the world through their eyes.
- Check in with your patient by saying something like: "I am wondering how I might see the situation if I were looking through your eyes…" or "I was imagining being in your shoes, and it occurred to me that I might (feel/think/be) …. Am I close?"
- Read essays, narratives and fiction that provide the point of view of others who differ from you in terms of culture, race/ethnicity, socioeconomic status or another characteristic.

2. Build partnerships with your patients. Cultivate a sense that you and your patient (and perhaps his or her family) are on the same team, working toward shared goals. Being in partnership with patients creates a sense of a common in-

group identity and reduces the likelihood of being "hijacked" by implicit biases.[61-64] Research has shown that we like, trust and are more motivated to help people in our "in group"—those we believe to be like us.[65-67] We tend to attribute the problematic behavior of members of our in-group to situational factors (eg, he was confused by the instructions), whereas we tend to attribute such behaviors among those who are not members of our in-group to an individual's intelligence or personality. For example, a white physician may describe an African-American patient who failed to take her medications as instructed as "nonadherent," yet that same physician might say a white patient who didn't follow her instructions for taking the medication "forgot the timing" or "needs additional instruction." Such attributions may cumulatively affect future encounters with those patients. Thus, the value of developing a partnership with patients and creating a sense of the patient being a member of ones' in-group can reduce categorization and associated implicit bias.[67-69] Partnership-building also promotes rapport and patient trust, potentially improving adherence and outcomes.

Steps you can take:

- Use the terms "we" and "us" instead of "I" and "you" to make it feel as if you're all members of the same team.[62] For example, instead of "*I* am going to order X test," try "*We* should probably use X test so we can find out…" or "*Let's* use X test." Instead of "*I* am going to prescribe Y" try "*Our* best course of action might be to try Y." Rather than say "If *you* have these side effects…" try "If *we* find that these side effects are a problem…"
- Focus on your common goals. It can help to articulate them by saying: "It seems as if our most important goal is to… (reduce symptoms, cure X, prevent Y, etc.)." This also helps prevent misunderstandings by allowing the patient to clarify or discuss them.
- Listen attentively and responsively, invite patients to participate in clinical decision-making, focus on the patient's strengths (and help that patient focus on their strengths), validate the patient's perspectives and concerns, and respect and honor their values.

3. Take care of yourself—protect your mental resources. Physicians and other health care providers are notorious for caring for others at the expense of their own well-being. However, converging lines of research suggest that self-care and emotional regulation skills are crucial to providing high-quality, unbiased care. Studies have shown that when people have sufficient motivation, resources, information, time and awareness to be mindful, their judgement, behavior and decision-making are much less likely to be undermined by implicit biases.[69-73] However, when illness, fatigue, stress, anxiety or competing demands command more of their mental resources, their cognitive processing capacity may be compromised, allowing implicit biases and attitudes to hijack perceptions, expectations and evaluations of patients. Unfortunately, competing demands, distractions, heavy workloads and time pressure—all of which can increase stress and fatigue and decrease cognitive capacity—are all too common in clinical settings.[74]

Steps you can take:

- Assess your practice for unnecessary cognitive demands. This may mean addressing such things as scheduling, noise levels, inadequate training, poor supervision and clinic or facility overcrowding. [75]
- Allow adequate time per patient and between patients, establish routines and make sure your clinic has sufficient staffing. [74]
- Do things to protect your mental energy, such as getting sufficient sleep, finding ways to reduce stress and taking mental breaks throughout the day to refocus on being present with your patients.

4. Be positive. Research suggests that physicians who have positive emotions during the clinical encounter are more likely to see their patients as unique individuals and/or part of their in-group, and less likely to categorize them in terms of their race, ethnicity or culture. [67, 76]

Steps you can take:

- Strengthen or add practices associated with positive mental health such as mindfulness-based stress reduction, regular physical exercise, engagement in a pleasant hobby or sport, and time with friends and family. Scheduled solitude, if you are a person who benefits from time alone.
- Learn and use strategies for rapidly shifting negative emotions, especially those caused by stress or anxiety. Examples include abdominal breathing techniques, progressive muscle relaxation, mindfulness, and/or focusing for a moment on something you appreciate or for which you feel grateful.

5. Counter negative stereotypes by exposing yourself to positive images. Our implicit biases reflect ideas repeated in the larger society. One way to reduce our own biases is to expose ourselves to images that differ from what we commonly see. Studies have shown that exposure to admired African Americans and to images of African Americans in positive settings reduced negative implicit bias on the part of whites. [77, 78]

Steps you can take:

- Seek out entertainment that portrays racial and ethnic minorities in positive roles; women as likeable, competent leaders; obese people as active and intelligent; and elderly people as intellectually sharp and productive.
- Display artwork that portrays members of various groups in a positive light. Having artwork in waiting rooms, hallways and exam rooms that counters stereotypes may both reduce negative bias and make diverse patients feel valued. Even engaging in mental imagery that involves counter-stereotypical representations has shown benefit.[79]
- Bring groups of diverse people together to work toward a common goal. A meta-analysis of 515 studies concluded that intergroup contact typically reduces intergroup bias and anxiety. [80]

Conclusion

Many people, physicians included, believe that the problem of implicit bias only applies to other people, even though research suggests that almost all of us have negative implicit attitudes toward people from various groups. But these implicit biases do not have to control our behavior. By engaging in self-awareness, being mindful, regulating our emotions, routinely practicing perspective-taking, building relationships with people in other groups, practicing self-care and protecting our mental energy, we can go a long way toward ensuring that our behavior toward others reflects our true values, goals and motives. **MM**

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Electronic Prior Authorization Is Here
What You Need to Know About It

BY JANET SILVERSMITH AND LAURA TOPOR

In January, Minnesota became the second state in the country to require use of electronic prior authorization (ePA) for medications. Electronic prior authorization is intended to reduce the time and cost associated with medication approvals. This article describes ePA and some of the challenges Minnesota is contending with during its implementation.

In our increasingly high-tech world, the fax machine sticks out as a relic from a bygone era. Yet until very recently, faxing paper forms was the mechanism most physicians, pharmacists, insurers and pharmaceutical benefit managers (PBMs) used to handle prescription drug prior authorization. In Minnesota, prescription drug prior authorization must now be done electronically. This article provides an overview of Minnesota's electronic prior authorization (ePA) mandate, describes how ePA works and discusses implementation issues physicians should consider.

Prior Authorization's Inefficiencies

The challenges associated with medication prior authorization are well-known to physicians. All will agree that it is time-consuming, inconsistent and costly. Research has shown that medical practices in the United States spend an average of $82,975 per physician per year on interactions with payers; much of that is tied to obtaining prior authorizations.[1] The prior authorization process also has been found to affect patient care, as it can prohibit patients from receiving essential therapies; result in substitution of less effective, more toxic or more expensive medications; and increase the use of more costly care.[2]

Efforts to improve the prescription drug prior authorization process—whether through use of common forms, electronic acceptance of those forms or adoption of complete electronic processes—have been sought for years. All have been built on Minnesota's 2008 Electronic Prescription Drug Program law, which mandated e-prescribing effective in January 2011.[3]

A provision in the law now requires all prescribers in the state to submit—and all payers to accept—prior authorization requests for prescription drugs electronically using National Council for Prescription Drug Programs (NCPDP) SCRIPT transactions.[4] (A fax is not considered "electronic" by law.) The law applies to nearly all payers, including self-insured health plans, workers compensation, no-fault auto insurance, and state and federal health care programs (eg, Medical Assistance and MinnesotaCare).

The goal of ePA is to provide for real-time, point-of-care processing of medication prior authorization. Ideally, here's how it works: A patient visits their physician's office, and the physician (or another prescriber) decides the patient needs a prescription for a certain medication. The prescriber uses his or her organization's EHR/e-prescribing platform to access information about the patient's insurance benefit for prescription drugs to find out whether the medication is on the formulary and whether it requires prior authorization. Such formulary and benefit data are routinely transmitted from insurers and other payers to EHR/e-prescribing systems.* Once the physician determines that prior authorization is needed, the information about what the insurer needs in order to review the request is transmitted to the physician or his or her designee. The physician then sends the necessary data via an ePA transaction, which is analogous to an electronic "envelope" used to send information from one computer to another. Ideally, the insurer then communicates in real time whether authorization is granted. Upon approval, the prescriber then submits the prescription to the patient's pharmacy to be filled (Figure). (Note: prior authorization may be triggered by a notice from the pharmacy based on a rejected

**The dissemination of formulary and benefit information to EHR/e-prescribing systems was mandated in Minnesota as part of the 2011 e-prescribing mandate. Physician practices that do not currently have access to this information are urged to contact their EHR/e-prescribing vendor for assistance.*

TABLE

ePA functionality among the most-used EHRs in Minnesota clinics

EHR	MARKETSHARE AMONG MINNESOTA CLINICS WITH EHRs	ePA OPERATIONAL
Epic	49%	Yes
NextGen	6%	No
Allscripts	6%	Yes
eClinicalWorks	6%	No
Cerner	4%	No

Sources: EHR use data available from Minnesota Department of Health, Office of Health Information Technology. Minnesota e-Health Report. Clinic: Adoption and Use of EHRs and Exchange of Health Information, 2015. August 2015. ePA operational data available from: CoverMyMeds. The ePA National Adoption Scorecard. October 2015. Available at: https://epascorecard.covermymeds.com/

claim. This may happen in situations where the prescriber did not have access to formulary and benefit data, or such data were not available, up to date, or specific to the patient at the time of prescribing.) Those who are already using ePA say the process is often completed in minutes, rather than hours or days.

Electronic prior authorization is intended for medications that are self-administered by patients. It is not, at this time, being used for medications administered in a physician's office or in other settings such as infusion centers. Prescribers should continue to use the processes otherwise established by insurers for authorizing medications in those settings.

The underlying technical configuration used to support ePA—the SCRIPT Standard—was developed by the NCPDP, a membership organization that develops and promotes standards and advises federal agencies on technical issues within the pharmacy industry. Most notably, NCPDP standards are incorporated in HIPAA administrative simplification and Medicare Part D (prescription drug benefit) regulations, as well as Minnesota's administrative simplification regulations. Electronic prior authorization is expected to be added to the Part D requirements in the near future. This will further accelerate its incorporation into EHR and e-prescribing systems.

Bumpy Road to Implementation

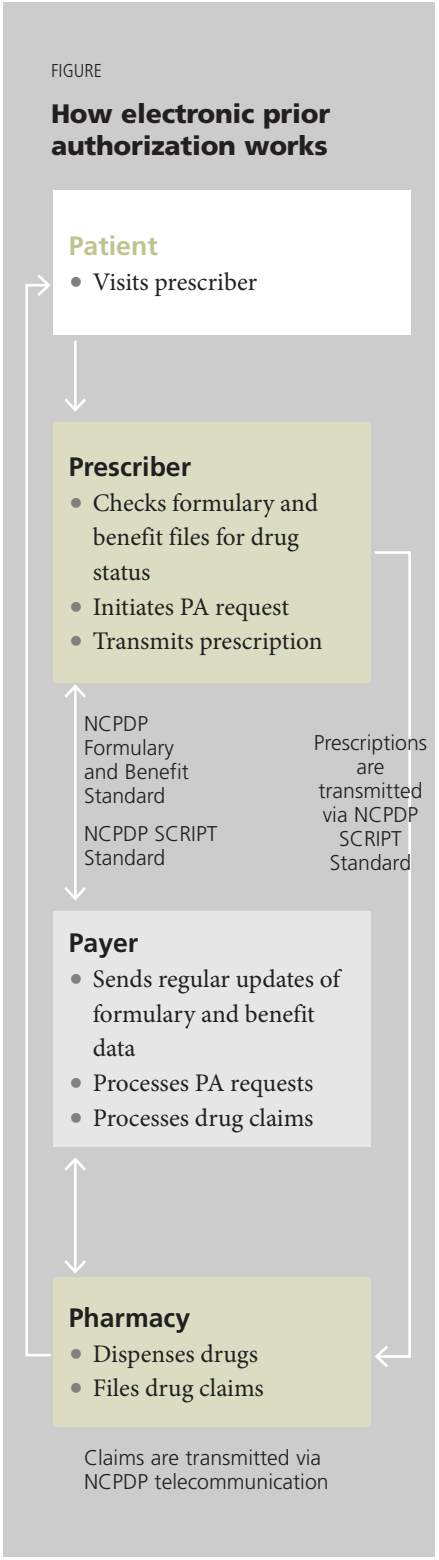
Minnesota is the first state to mandate the use of ePA using the NCPDP standard.† But the move to ePA hasn't been without challenges. Because there is no federal requirement for adoption of ePA, many e-prescribing and EHR vendors have not yet incorporated ePA functionality. The Table summarizes the status of ePA functionality of the five most commonly used EHRs in Minnesota clinics at the time of this writing. Other EHR vendors that also lack ePA functionality at the time of this writing are AmazingCharts, athenahealth, e-MDs, GE Healthcare, Greenway Health, McKesson and Meditech. Physician practices are encouraged to contact their vendors directly to learn whether their EHR has ePA functionality, and if not when it's expected to be available and if any version updates will be needed. If they do not have access to ePA through their EHR, physicians may be able to achieve compliance with the state mandate using web-based services such as CoverMyMeds and PARx.

Another challenge has been slow adoption of ePA by payers and PBMs. Some national payers may not yet have ePA capabilities. Several large companies including Aetna, Cigna and UnitedHealthcare

† Maryland required use of online systems to accept electronic prior authorization requests in 2013. Minnesota is the first state to require use of a specific standard (the NCPDP SCRIPT Standard) for electronic prescription drug prior authorization.

FIGURE

How electronic prior authorization works



appear to be on track even though they have limited market penetration in Minnesota. Among payers that do not have such capabilities at the time of this writing are the Minnesota Department of Human Services (Medical Assistance and MinnesotaCare) and HealthPartners. The state has indicated that it will not be able to accept electronic requests for medication prior authorizations until at least April 1, 2016. HealthPartners has not yet provided a go-live date.

Conclusion

Full adoption of ePA for medications offers enormous potential for reducing the time and cost associated with negotiating variable insurance requirements and labor-intensive administrative processes. Physicians and patients may still experience challenges accessing formularies and obtaining coverage for medications, but ePA should facilitate communication between prescribers and payers and improve the prior authorization process for all parties. **MM**

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Adult Blood Lead Levels in Minnesota

Rates and Trends, 2005-2012

BY ADRIENNE LANDSTEINER, PHD, MPH, STEPHANIE YENDELL, DVM, MPH, PAULA LINDGREN, MS, LARRY OLSON AND ALLAN WILLIAMS, PHD, MPH

Lead exposure is associated with a number of adverse health events including peripheral neuropathy, anemia, renal damage and cognitive impairment. The vast majority of adult lead exposures occur in the workplace. By statute, all results from blood lead level (BLL) tests performed in Minnesota are submitted to the Minnesota Department of Health for surveillance purposes. We analyzed that data to examine lead exposure trends from 2005 through 2012. We found that an average of 548 persons 16 years of age and older had a BLL greater than 10µg/dL each year during that period. Analysis of the prevalence rate of elevated BLLs among adults for the years 2005–2012 showed a modest, nonsignificant decline among those with BLLs greater than 10µg/dL. Much has been done to reduce exposures and BLLs among young children. However, the policies and standards that protect workers have not been similarly adjusted, and many workers remain at risk of exposure. Although OSHA is responsible for developing and implementing policies and standards to protect workers, health care providers can play a critical role in identifying cases of lead exposure by asking patients about their occupation and industry. Those working in high-risk industries should be tested to determine whether they have been exposed and intervention is warranted.

Numerous adverse health effects are associated with lead exposure. They include peripheral neuropathy, anemia, renal damage, neurodevelopmental effects, cardiovascular disease, gastrointestinal disease, joint pain, reproductive complications and cognitive impairment.[1-6] Less understood is the extent to which those conditions affect adults who have low-but-constant levels of exposure.

The Occupational Safety and Health Administration (OSHA) established standards for lead exposure for general industry in 1978 and for the construction industry in 1995.[7] However, little has been done in recent years to address lead exposure among adults in the workplace. Of particular concern is lead exposure among those of reproductive age. Elevated blood lead levels (BLLs) have been associated with infertility, miscarriage and neurobiological fetal effects.[6] Ongoing research suggests the developing fetus is at risk for deleterious health outcomes even if the mother has been exposed to lead levels that are lower than those previously identified as being harmful.[1, 8-10]

Another significant concern related to workplace exposure is the potential for take-home exposure. Take-home exposure occurs when clothing and other items contaminated with lead-containing dust are brought into the home and children and others in the household come in contact with them. This is especially problematic for children as lead exposure can have significant consequences for their health and development. In the case of young children, symptoms of lead exposure are usually subtle, and the effects on neurodevelopment may not be evident until they start school.[11] Numerous cases of take-home lead exposure have been reported in Minnesota, accounting for approximately 10.4% of the elevated BLL cases among children 6 years of age and younger that were investigated by the Minnesota Department of Health between 2012 and 2014.[1,2,10,12-15] Adverse health effects are believed to occur at levels ≥10µg/dL.[11]

Because approximately 95% of cases of elevated BLLs in adults can be linked to occupational activities, policies and procedures can be instituted to prevent or limit exposure.[16] OSHA has established a permissible exposure limit (PEL) of 50 micrograms of lead per cubic meter of air (µg/m^3) over an eight-hour period for general industry and shipyards. Employers are required to take specific actions such as providing medical surveillance and blood lead level monitoring when a level of 30µg/m^3 is reported. (OSHA standards only account for exposures to lead in the air; they do not account for exposures that may occur through other routes, such as ingestion of lead dust that has settled onto surfaces.) If an employee is found with a BLL greater than 60µg/100g, he or she must be removed from the workplace until they have a repeated BLL of 40µg/100g or less. Individuals whose workplaces are not regulated by OSHA or do not exceed the PEL are unlikely to undergo medical surveillance for lead exposure.

The Minnesota Department of Health conducts ongoing surveillance of lead levels in adults to study exposure trends. This also allows us to distinguish between new and old/sustained cases and identify the industries with the greatest number of

cases. This article reviews lead exposure rates and trends in the state reported between 2005 and 2012.

Methods

State law requires that all blood lead test results for Minnesota residents be reported to the Minnesota Department of Health (Statute 144.9502). The department's Adult Blood Lead Epidemiology and Surveillance (ABLES) program collected relevant demographic information about gender, age, and occupation and industry for each adult whose lead test results were reported between 2005 and 2012. (Funding was discontinued in 2013 and re-established at a lower level in July 2015.[17])

Adult cases were defined as those with Minnesota or unknown residency status who were 16 years of age or older with at least one blood lead test result of ≥10µg/dL reported between 2005 and 2012. All adult lead tests are collected regardless of employment status (employed vs. unemployed). Individuals with elevated BLLs may be tested repeatedly throughout the calendar year.

We used the blood lead test with the highest result for an individual in a given year for our analysis. Cases were then assigned either incident or prevalent status, depending on test results for the individual during the previous year. An incident case is one in which an individual did not have an elevated BLL (≥10µg/dL) reported in the preceding year. Prevalent cases include both the incident cases as well as those in which an individual had measures at the level of interest in the preceding year. Annual incidence and prevalence counts and rates were calculated for the years 2005 to 2012 for three groups: those with BLLs ≥10µg/dL, ≥25µg/dL and ≥40µg/dL.

The Bureau of Labor Statistics provides estimates of the number of employed persons in Minnesota 16 years of age and older each year. We used those estimates to create prevalence and incidence rates of elevated BLLs per 100,000 employed persons. Trend analysis of these rates was completed using JoinPoint 4.04 a statistical software package developed by the National Cancer Institute.[18]

Findings

Between 2005 and 2012, 3,771 to 8,860 individual test results were reported annually to the Minnesota Department of Health (Table 1). For the years 2006 through 2012, the majority of reported test results were for women (57%). However, of the 493 cases with elevated lead BLLs (≥10 µg/dL) reported in 2012, only 34 (6.9%) were for women. Fifty percent of those women were younger than 47 years of age.

In 2005, a total of 607 individuals had a BLL ≥10µg/dL. In 2012, the number of individuals with a BLL at or above 10µg/dL lead declined to 493. However, the number of cases with a BLL ≥40µg/dL has remained fairly consistent over the eight-year period. Between three and 17

TABLE 1

Counts and rates of blood lead levels in Minnesotans 16 years of age and older, 2005–2012

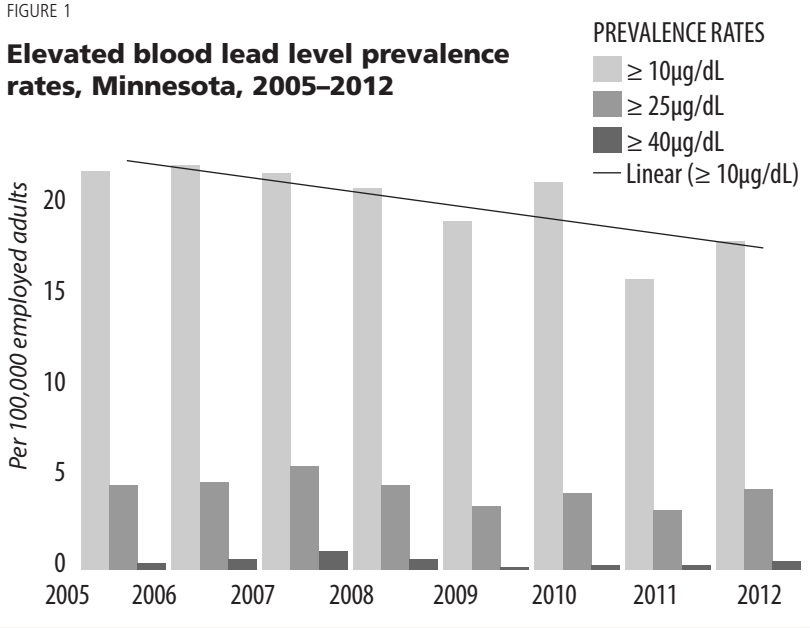
	2005	2006	2007	2008	2009	2010	2011	2012
Number of blood lead tests performed in individuals ≥ 16 years of age	4,770	7,525	8,675	9,944	9,357	9,767	8,896	8,854
Number of individuals ≥16 years of age with a blood lead test performed	3,771	6,487	7,569	8,860	8,297	8,603	7,898	7,746
Number of blood lead tests performed in those 16 – 29 years of age	1,173	2,232	2,512	3,375	3,010	2,958	2,677	2,622
Number of blood lead tests performed in those 30 - 49 years of age	1,708	2,658	3,017	3,406	3,294	3,456	3,248	3,129
Number of blood lead tests performed in those ≥ 50 years of age	890	1,597	1,986	2,079	1,993	2,189	1,973	1,995
Number of blood lead tests performed in females	2,051	3,096	3,476	3,546	3,396	3,776	3,384	4,342
Number of blood lead tests performed in males	1,712	3,382	4,069	5,283	4,890	4,821	4,507	3,402
Number of prevalent ≥10 µg/dL cases	607	616	593	563	509	572	428	493
Number of incident ≥10 µg/dL cases	282	283	271	242	191	240	181	265
Number of prevalent ≥25 µg/dL cases	131	134	156	125	96	113	88	123
Number of incident ≥25 µg/dL cases	41	38	56	52	39	60	41	66
Number of prevalent ≥40 µg/dL cases	11	18	29	17	5	7	7	12
Number of incident ≥40 µg/dL cases	6	7	17	12	3	6	6	11

incident cases were reported each year, for an annual average of nine cases.

Figure 1 shows the annual prevalence rates for 2005 through 2012. In 2012, the annual prevalence rates for cases with a BLL ≥10µg/dL, ≥25µg/dL and ≥40µg/dL were 17.8, 4.4 and 0.4 per 100,000 employed persons 16 years of age and older, respectively. In comparison, the annual incidence rates in 2012 for the three groups were 9.5, 2.4 and 0.4 per 100,000 employed persons 16 years of age and older, respectively. Analysis of prevalence and incidence rate trends for the three BLL groups over the eight-year period demonstrates a slight but not significant decline in most of the rates. Only the rate for prevalent BLL ≥10µg/dL group was found to have a significant, though very small (3.5% per year), downward trend ($P = .022$).

FIGURE 1

Elevated blood lead level prevalence rates, Minnesota, 2005–2012



Of the 493 cases with elevated (≥10µg/dL) BLL reported in 2012, 361 (73%) had information recorded about the industry in which the individual worked. Sixteen industries were identified as being associated with cases of elevated blood lead levels. The greatest number of cases were found in the refining/foundry and manufacturing industries (Figure 2). Small arms ammunition manufacturing, sporting and athletic goods manufacturing, and glass manufacturing in particular are associated with increased lead exposure. Jobs in the refining/foundry industry associated with increased exposure include primary smelting and refining of nonferrous metal, those in other nonferrous foundries and those in aluminum foundries (except die casting). Battery recycling and small arms ammunition manufacturing were the two job categories with the greatest number of cases, 235 and 27 respectively, in 2012.

Discussion

The ABLES data show some positive findings but also point to a need for continued surveillance of blood lead levels in adults and for additional efforts to reduce exposures.

The fact that women accounted for more than half of all blood lead test results is encouraging as it suggests that employers and/or health care providers are taking the initiative to ensure those of child-bearing age are being screened for lead exposure. Fortunately, only a few (6.9% in 2012) of the tests with elevated BLLs (≥10µg/dL) involved women, possibly because there are fewer of them working in the industries and occupations for which the risk of exposure is greatest. However, reduction of elevated blood lead levels is important in all persons of child-bearing age, as detrimental reproductive outcomes associated with lead exposure have been documented for both genders.

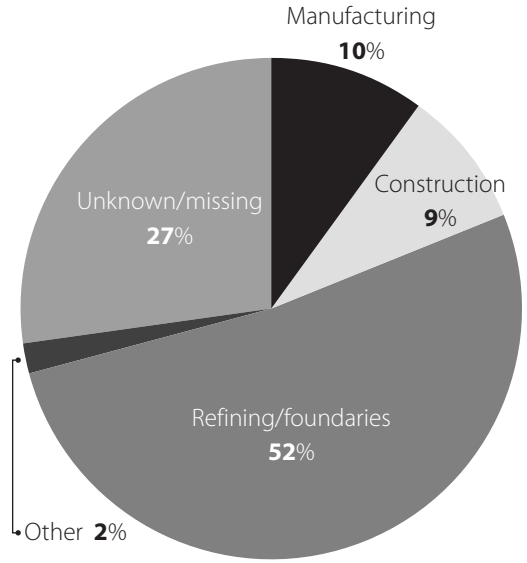
The data show there is well-warranted concern about take-home lead exposure, as poor health outcomes have been found at lower and lower levels of exposure.[1,3,6] More education is needed about preventing take-home exposure in children and others in the household, including pregnant women.

Being able to identify prevalent adult cases of elevated BLLs can be useful in pinpointing employers with ongoing unmitigated exposures. In addition, incident cases can help identify industries and occupations with unrecognized hazards that may benefit from education about how to prevent and reduce further exposure.

Physicians and other health care providers have a role to play in helping their patients avoid lead exposure. They can start by asking patients what they do for a living and for fun. Those with certain oc-

FIGURE 2

Percentage of prevalent cases (≥10µg/dL) by industry, Minnesota, 2012



cupations or hobbies (Table 2) should be offered a blood lead test (those who are pregnant or planning to become pregnant should definitely be tested). Physicians are also in a position to educate patients about the health hazards of lead exposure.

TABLE 2

Jobs with a high risk of lead exposure*

Artist (materials may contain lead)
Auto repair (car parts may contain lead)
Battery manufacturer (batteries contain lead)
Bridge reconstruction worker (old paint may contain lead)
Construction worker (materials may include lead)
Firing range instructor and gunsmith (ammunition contains lead)
Glass manufacturer (lead may be used in glass production)
Lead manufacturer
Lead miner
Lead refiner
Lead smelter
Manufacturer of bullets, ceramics and electrical components (all contain lead)
Painter (old paint and commercial paint may contain lead)
Plastic manufacturer (materials may contain lead)
Plumber and pipefitter (pipes may contain lead)
Police officer (ammunition contains lead)
Radiator repair (radiators may contain lead)
Recycler of metal, electronics and batteries (materials may contain lead)
Rubber product manufacturer (materials may contain lead)
Shipbuilder (materials used may include lead)
Solid waste incinerator operator (waste may contain lead)
Steel welder (galvanized steel is coated in part with lead)

*This list is not exhaustive.

Source: www.cdc.gov/niosh/topics/lead/jobs.html

Conclusion

Lead exposure among working-age adults in Minnesota continues to be a concern. Continued surveillance of at-risk groups is critical for monitoring its status. Surveillance begins when employers or health care providers identify at-risk patients and order blood tests. The results of those tests can help target education as well as prevention and intervention strategies to the appropriate individuals and employers. With coordinated efforts among state agencies, health care providers, industry and individuals, we can reduce lead exposure in working adults and prevent the detrimental effects it can have on health. **MM**

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The findings and opinions presented are solely the responsibility of the authors and do not necessarily represent the official views of the National Institute for Occupational Safety and Health.

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Resources for Physicians

For identifying lead poisoning:

- Minnesota Department of Health's blood lead screening guidelines (www.health.state.mn.us/divs/eh/lead/guidelines/index.html)

For addressing lead exposure in pregnant women:

- Minnesota Department of Health's guidelines and protocols for addressing lead exposure among pregnant women (www.health.state.mn.us/divs/eh/lead/guidelines/index.html)

For information about how to deal with a case of adult lead exposure:

- Recommendations for medical management of adult lead exposure. Environmental Health Perspectives. (www.ncbi.nlm.nih.gov/pmc/articles/PMC1849937/)
- Council of State and Territorial Epidemiologists' management guidelines for blood lead levels in adults (http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/OccupationalHealth/ManagementGuidelinesforAdult.pdf)

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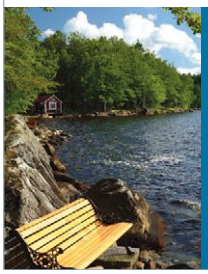

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EMAIL: administration@lakeviewclinic.com
WEB: www.lakeviewclinic.com

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Affiliated Community Medical Centers is a physician owned multispecialty group with 11 affiliate sites located in western and southwestern Minnesota. ACMC is the perfect match for healthcare providers who are looking for an exceptional practice opportunity and a high quality of life. Current opportunities available for BE/BC physicians in the following specialties:

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FOR MORE INFORMATION:
Kari Lenz, Physician Recruitment | karib@acmc.com | (320) 231-6366

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FAIRVIEW

UNIVERSITY OF MINNESOTA
Medical School
DULUTH CAMPUS

The University of Minnesota Medical School Duluth invites applications for a full-time Assistant Professor (teaching track; non-tenured) in the Department of Family Medicine and Community Health Duluth.

Candidates must have a M.D. or D.O. degree with Board Certification in Family Medicine or other primary care specialty, licensed or license eligible in Minnesota, with a minimum of 3 years of related clinical practice. Evidence of essential verbal and written communication skills, including clarity in the delivery of lectures, as well as evidence of medical student and/or resident teaching is required. Preference will be given to candidates in the Family Medicine Specialty with experience with collaborative relationships including work in team settings with other health care professionals. Experience with teaching in a variety of settings and formats, including lectures, small groups and clinical instruction and interest in or evidence of medical education research is preferred. Experience in curriculum development, innovative teaching and learning practices and grant writing is strongly desired.

For additional details regarding the position and to ensure consideration follow the application instructions online at: http://www1.umn.edu/ohr/employment/index/html (Job Opening ID #307392) **Questions** concerning the online application process should be directed to Linda Liskiewicz at lliskiew@d.umn.edu.

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- Sauk Centre
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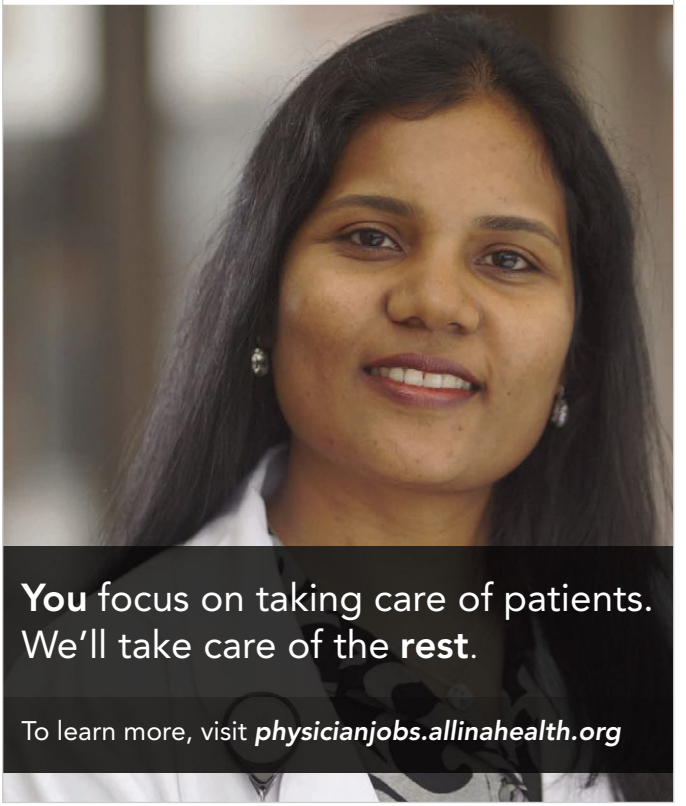

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All of these positions are full-time working a 4 or 4.5 day, Monday – Friday clinic schedule. Our Minnesota opportunities are family medicine, no OB, outpatient and based in a large metropolitan area and surrounding suburbs.

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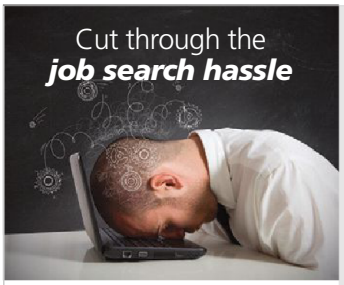

MMA Online Physician Career Center

A one-stop online job site for physicians looking for a new position and clinics looking for a new colleague.

Minnesota Medical Association

Why use MMA Physician Career Center?

- **No cost** for job searchers
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For more information, go to **www.mnmed.org/careercenter**

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FamilyHealth Medical Clinic, part of the independent healthcare community of Northfield Hospital & Clinics, is seeking a physician to join one of our clinics in the South Metro.

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Northfield Hospital & Clinics

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For more information, contact:
Alexandria Clinic
Attn: Brad Lenertz
610-30th Ave W
Alexandria, MN 56308
Phone: (320) 763-2540
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www.siouxfalls.va.gov

In the ultrasound room

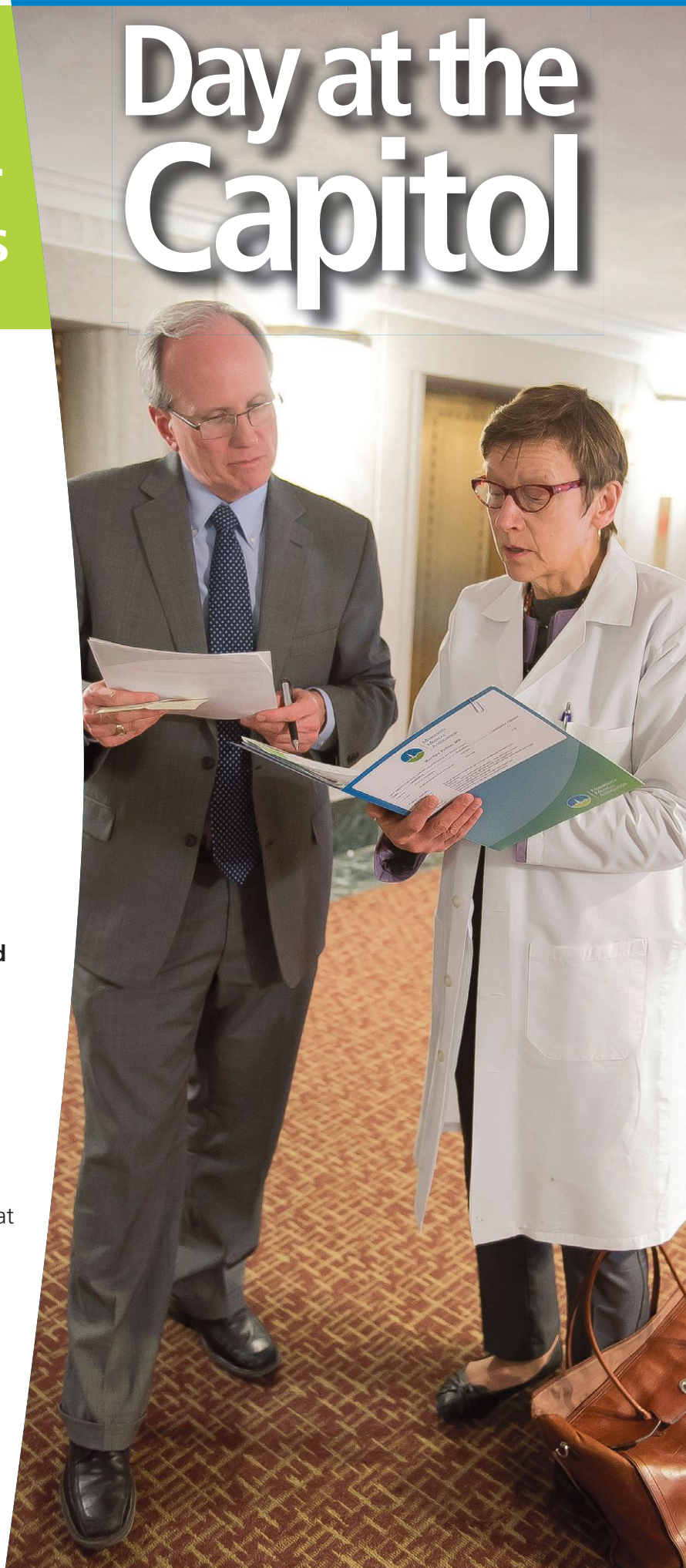
BY ARIELA TAUB, MD

The nurse scours my stomach
With ice-cold blue gelatin
And shows me a glimpse
Of your skeletal profile,
And you look so endearing
I nearly forget
How you kicked
My rib cage
at 9 this morning.
It's a girl,
The nurse says,
A girl.
Flashes of English tea parties,
Topaz tutus and moonlit crystal tiaras
Sparkle through my mind.
A breathing doll to dress
In ribbons and scarlet rosettes.
You are a part of me,
Close enough for me to protect
From mercury poisoning, ethanol
And caffeine,
But not to hold, just yet,
Not to smile with and brush
Your soft cinnamon curls.
A baby girl
Blooming in the bulge
Of my ballooning abdomen.
My legs are sore and my belly
Is now the size of a beach ball
And as smooth as a jellyfish's cap.
But all that matters
Is that I will teach you
How to feel beautiful all
Of the time,
And how to sing,
Even when life
Kicks you in the guts, hard,
And how to find pleasure
In the sweetened honeysuckle scent
And taste of a warm fresh slice
Of my peach cobbler cream pie,
Baked just for you.

Ariela Taub is a first-year pediatric resident at West Virginia University Children's Hospital in Morgantown. "This poem is based on my personal experience of finding out I was having a daughter. It is meant to capture in words that overwhelming joy when a fetus becomes a little boy or girl."

Day at the Capitol

Meet in-person WITH YOUR state rep and senator at the MMA's



DAY AT THE CAPITOL 2016

Wednesday, March 23, 2016

Noon

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