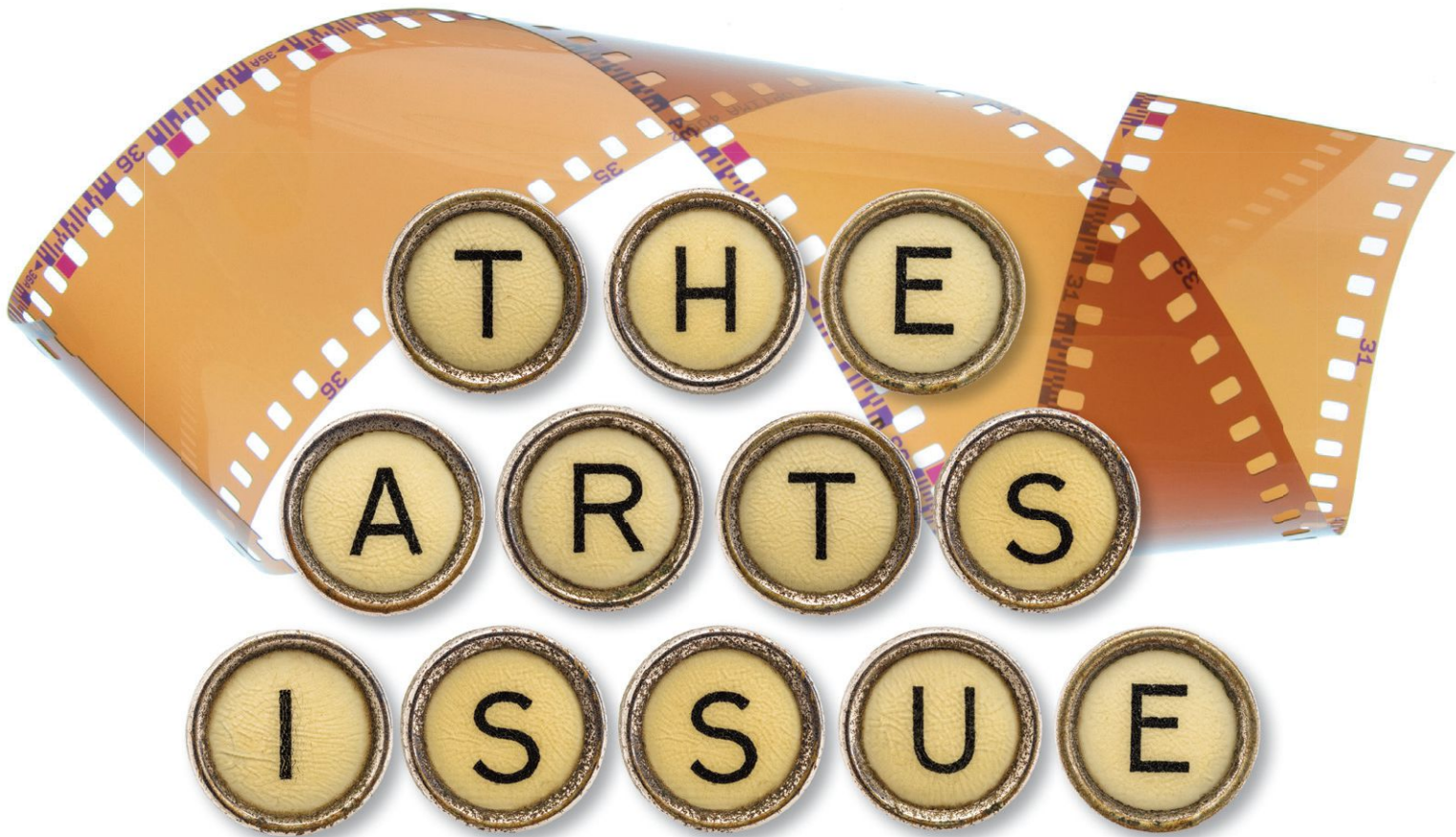


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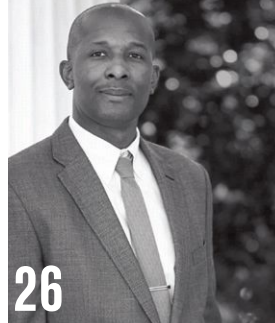
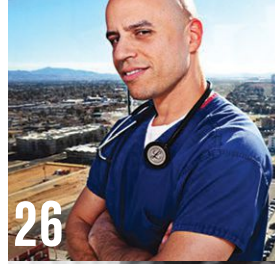
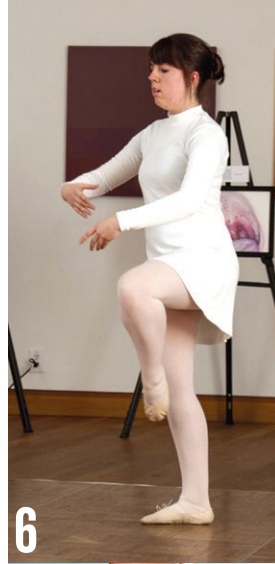
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PHOTO BY SCOTT WALKER

Charles R. Meyer, MD, Editor in Chief

Patients give us only so many clues to solving their problems. If we shortchange what comes out of their mouths, we've lost the most important one.

The art of medicine

When my daughter was in high school, she started bringing home drawings from art class that looked pretty good to my untrained eye. At teacher conferences, her art teacher opined, “She does have talent.” She went on to major in art in college, producing paintings and drawings that now grace the walls in our house. She currently makes a good living as a freelance graphic designer, the paying outlet for artists. Having been told for years that my attempts at art look like a botched Rorschach test, I have often asked, “Where did those genes come from?”

This month's issue covers arts that also exceed my skill set. My dancing endangers the feet of she whom I love. My acting career ended with a stilted second-grade performance in which I impersonated a bus driver. The details of the plot are hazy, but the memory of my ineptitude is clear. One art that I have studied for 40 years is the art of practicing medicine. The tension between the science and art of medicine has been a constantly evolving tug-of-war. Now, when science seems to be winning with the flowering of technology, we realize what we are losing as the poetry of the patient disappears amidst the MRIs and the echocardiograms.

The art of medicine is the soft stuff that, with wisdom, lends meaning to the hard facts of science. Asking questions of the patient, explaining and listening are some of the artful skills necessary for the successful practice of medicine. On the one hand, these seem rudimentary. Like breathing and walking, they are staples of everyday existence that we all have used since we learned language. Yet the probing, explaining and listening demanded

by medicine is deeper and more complex than what's needed when you meet your neighbor or talk to the clerk in the hardware store.

Patients need a relationship that is more than what's encountered in casual conversation—one in which each speaker is engaged in what the other person is saying. We don't get much practice with this in today's social media culture of one-way communication in which many conversations end up being story-swapping, an almost mindless parrying of sentences back at your interlocutor that may have only a faint relationship to what they said. Such repartee seems to say that what I say is more important than understanding what you said.

That doesn't work in the exam room. Patients give us only so many clues to solving their problems. If we shortchange what comes out of their mouths, we've lost the most important one. Even when we're tired or distracted, we need to be interested enough in what the patient says to think about it, to ask questions about it and to understand what it means to them. And for many of us, that isn't second nature. It takes practice. It is an art, in some ways more difficult than painting, dancing or acting.

Knowing your patients is an accretive art, like layering oils in a painting, which is added to with each visit as you probe, explain and listen. A masterpiece unfolding in the exam room.

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

Signs of progress on the opioid front

Minnesota is significantly affected by opioid abuse and addiction. The problem has led to a multidimensional, tragic and widespread public health crisis. Here and nationally, drug-induced deaths outnumber motor vehicle-related deaths. Opioid overdose deaths outnumber those involving cocaine and methamphetamine combined.

This crisis is fueled by both the nonmedical use of prescription opioids and the availability of high-purity, low-cost heroin.

In 2012, as a state government policymaker, I joined my colleagues from eight other state agencies in identifying heroin/opiates as Minnesota's No. 1 drug-abuse priority area and proposing solutions to the problems of abuse and addiction. Since then, many task forces have been formed and public forums held on the issue.

In 2014, Minnesota lawmakers passed the Good Samaritan plus Naloxone bill, known as "Steve's Law," which makes naloxone, the immediate antidote for opioid overdose, more widely available.

Since then, opiate-related deaths in Hennepin County, which was a leader in implementing the law, have declined from 132 in 2013, to 102 in 2014, to 97 in 2015. Were lives saved by the naloxone law? It's difficult to say, yet it's reasonable to assume that the law's influence is reflected in the decline.

Implementation of this law isn't the only way we've collectively responded to the opioid epidemic.

Consider this:

- Law enforcement seizures of heroin throughout the state have soared. Statewide, seizures by Minnesota multijurisdictional drug task forces increased 47 percent from 2014 to 2015.
- More people than ever are receiving treatment for their opiate addiction. In the Twin Cities metropolitan area in 2015, there were 5,675 admissions to addiction treatment programs for heroin/other opiate dependency (one-quarter of all treatment admissions). Statewide in 2014, 9,993 admissions were for heroin/other opiates (18.4 percent of all treatment admissions).

Despite this progress, there's more to be done. The medical community must do its part to help end the crisis by curtailing the supply of prescription opioids in circulation and changing the practice of medicine in regard to pain management and addiction. Until that happens, we cannot fully resolve the far-reaching and persistent opioid conundrum.

We need to remain diligent in our resolve to work together on current and future solutions.

Carol Falkowski
CEO, Drug Abuse Dialogues
St. Paul

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The importance of balance

In May, University of Minnesota medical students spent an evening showcasing their artwork, musical talents, dance abilities and writing skills before an audience of friends, family members and faculty at the Weisman Art Museum in Minneapolis. The students were all recipients of the 2015-16 Fisch Art of Medicine Student Awards. The awards program, which was created by retired University of Minnesota pediatrician and artist Robert Fisch, MD, and is in its ninth year, is all about encouraging students to explore an interest outside of medicine. The award enables students to buy materials, take lessons or travel to pursue an art

form. "The idea behind the awards is to have the opportunity to do something you love to do," Fisch told audience. "The only criteria is that you have fun."

Often students use their award to revive an interest that has languished. Always, they find inventive ways to do so. This year's students were no different. As Jon Hallberg, MD, associate professor in the university's department of family medicine and community health, who introduced the recipients noted, "They came up with some ideas that knock your socks off." Here's a look at several who presented their work.

Josh Dégallier | painting

The nine easels displaying watercolor and acrylic paintings of mouths and teeth were hard not to notice. Josh Dégallier's work featured as its subject oral pathologies, including Kaposi's sarcoma, strep throat and strawberry tongue. For Dégallier, who had just finished his second year of medical school at the University of Minnesota, Duluth, making the paintings was about much more than representing disease. "My idea was to tie my career in medicine with what my father and his father did," he explains. Dégallier's grandfather, originally

from Switzerland, was a painter and OB/GYN; his father is a dentist in Winona.

Dégallier recalls painting with his grandfather. "He showed me how to keep

proportions right and measure things," he says. "But I never continued with it." He says getting the Fisch award forced him to take time out of his day to paint. "It was a great way to get my head out of the books and reconnect with my own individuality and creativity," he says. "That gets lost in medical school."



PHOTOS BY KRISTEN CARLVON

Josh Dégallier may make some of his pieces available to dental offices. "They're not something you want to display in your living room," he says.



Kent Nichols | woodworking

For Kent Nichols, the Fisch award offered an opportunity to connect his past and future. Nichols, who recently finished his third year of medical school, grew up on a 32-acre hobby farm near Milaca, Minnesota. Some of his fondest memories are of walking through the woods and helping his godfather split logs. Nichols used to



make little gifts for family members from the remnants of those cuttings. This year, he made a gift out of wood for his fiancé, who is a Lake Superior surfer.

Using a piece from a fallen ash tree, he crafted a decorative surfboard. "I thought it would be interesting to make a surfboard out of some of the wood I grew up around,"

he says. Nichols is working on another board that guests will sign at his wedding later this month.



Kent Nichols also combined his personal interest in woodworking with his professional interest in neurology and burned images from an MRI of his brain into sections of a birch log.

Kalli Hess | ballet

As a girl in Pipestone, Minnesota, Kalli Hess dreamed of becoming a professional ballet dancer. "That's the only thing I remember wanting to be," she says. Although medicine eventually became her career choice, she didn't give up on dance. Hess, who recently graduated from the University of Minnesota Medical School, looked into taking ballet classes during her undergraduate years at Concordia College in Moorhead and her first two years of medical school at the University of Minnesota, Duluth. But she couldn't find a way to make it work. "Most had strict attendance requirements."

When she moved to St. Paul for her last two years of medical school, she found herself living a block away from the St. Paul Ballet's studio, which offered adult classes with flexible schedules. She started taking lessons even before she received her Fisch award. At the showcase, Hess performed a piece she choreographed to "Solace," by the band Tow'rs.

As she begins residency in pediatrics at the University of Minnesota, Hess hopes to continue with ballet. "There are parts of being human that are hard to express with words—areas of emotion that are hard to tap into," she says. "Dance offers another avenue to express what you're feeling."

Despite a long hiatus from ballet, Kalli Hess found she remembered much from the dance lessons she took as a child. "A lot of things came back pretty naturally, and it was fun to rediscover that."



*Other 2015-16
Fisch Art of
Medicine Student
Award Winners*

Stephanie Aldrin,
pottery

Kelsey Christoffel, *piano*

Dominic Decker, *poetry*

Sarah Fleming, *pottery*

John Daniel Hokanson,
singing

Casey Sautter, *dulcimer*

Dane Nimako,
video game design

Brian Sweis,
micro-etching

Mayank Verma,
light sheet microscopy

Christina Warner,
sculpture

Charlotte Rogers,
mandolin



Brad Moser, MD, cares for a dancer at the Minnesota Dance Medicine Foundation's clinic.

PHOTOS COURTESY OF THE MINNESOTA DANCE MEDICINE FOUNDATION

The DANCE Doctor

professionals. He is the company physician for TU Dance in St. Paul and a member of the Dance USA Task Force on Dancer Health, which is creating a dance injury registry. Researchers will be able to study the prevalence according to genre (ballet, jazz, modern or tap, for example) as well as by age and level of experience.

So how did Moser, a self-confessed “soccer guy,” who plays on an adult league and serves as the team physician for US Soccer and Minnesota United, get interested in dance? He admits it was somewhat by accident. “I had friends in dance when I was in fellowship—they were local dancers, professionals from small companies. They knew I was becoming a sports medicine doctor. They said there was no ‘go to’ doctor in town committed to treating dancers and that I should become that guy,” he explains. “So I ran with it and made it my niche.”

As word spread, Moser met a couple of physical therapists who worked with dancers. They began referring patients to each other. In 2009, they formalized their relationship by establishing the foundation. Today, the foundation has 14 professionals affiliated with it including Moser, physical therapists, certified athletic trainers, a Pilates expert and a nutritionist. Many are former dancers or dance instructors.

Each month, the foundation holds free clinics for dancers, many of whom are uninsured or underinsured. Staff screen them for injuries, and either treat them or refer them for treatment. They also travel to dance studios throughout the Twin Cities to discuss injury prevention and nutrition with students and teachers. In addition, they hold an annual conference for dancers and a biannual conference for dancers and health care professionals. Nearly 400 dancers from the Midwest attended the dancer-only event earlier this year. Last year’s medical conference drew about 150 health care professionals who came to learn about injury prevention and treatment.

Moser says many dancers suffer from hip, foot, ankle, knee and back injuries caused by overtraining or improper technique. “These injuries can happen in other

On a Friday afternoon, the lobby of the Cowles Center in downtown Minneapolis is quiet. During this pause before the evening performance of the James Sewell Ballet, a few people shuttle in and out of the offices housed in the building—one of which is home to the Minnesota Dance Medicine Foundation. The tiny third-floor space, with its bright purple walls and signed posters of performers, is where Brad Moser, MD, and colleagues tend to injured dancers.

Modeled after the Harkness Center for Dance Injury in New York, the foundation is one of a few organizations in the United States that focuses specifically on the health of dancers. And Moser is one of a select group of physicians who have made caring for “dancer-athletes” a significant part of his practice. “It’s my passion,” says Moser, a primary care sports medicine physician with Twin Cities Orthopedics.

Known as Minnesota’s dance medicine doctor, Moser cares for dancers of all ages—from 7 year olds starting ballet to

athletes, but there are certain ones, particularly hip injuries, that are more prevalent in dancers because of the range-of-motion requirements.”

He says he enjoys working with dancers because of their determination and commitment. “Dancers are the most dedicated, strongest athletes I’ve ever seen,” he says. “They’re motivated to get better, to not lose any time. And when you instruct them on how to prevent injuries, they follow through.”

Moser eventually hopes the foundation will become a resource for physicians and other health care professionals. “They may not have all the knowledge they need to diagnose a dancer and get her on the right treatment plan,” he says. “Ultimately, we want to be recognized as the experts in the field in the Twin Cities and beyond.” – KIM KISER



Moser says he’s met young dancers who want to go into medicine or a related field. “Maybe one day they can take over and expand on this,” he says of the Minnesota Dance Medicine Foundation’s work.

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Second act

After acting professionally for more than two decades, Mark Nelson exited the stage to become a physician.

BY CARMEN PEOTA

Former Guthrie actor Mark Nelson, MD, is starting residency in family medicine this summer.

cast opposite Rainn Wilson (who would go on to play the infamous Dwight on the television show “The Office”) in “Philadelphia, Here I Come!”

He married O’Neill in 1998. When the couple was expecting their first child they began to think about living somewhere that might be more conducive than New York to raising a family. Minneapolis seemed like that place. Nelson and O’Neill moved to Minneapolis in 2003, and both became regulars at the Guthrie and other theaters. By most accounts, he’d made it.

Throughout those years, though, Nelson did what his acting professor had advised: He kept asking himself, Why am I doing this? And he had answers: He was good at it. He loved it. He was successful.

Subtle shift

Yet as time went on, the answers didn’t come as easily. He considered the long hours and energy he was investing and the fact that he could never count on a regular income. “There is such a level of sacrifice to being an actor,” he says. He found performing meant less than it once had. “The applause and accolades are nice,” he says, “but what I loved most about being an actor was the research and the time you spent in rehearsal trying to truly understand the character you were playing.”

“It’s not a simple story, so I don’t tell it often,” Mark Nelson says when asked why he left a successful career in acting to pursue medicine. “There was no ‘a ha’ moment; it was a slow kind of thing.”

With a voice that betrays training—he enunciates a bit more clearly than the average person—the Julliard-trained actor begins. The starting point: his freshman year at the University of Utah in a beginning acting class, when his professor pointed out that 95 percent of actors couldn’t make a living in the field. It was an impossible career, he’d tell them. Why do you feel you need to do this, he’d ask, hoping to instill the idea that if they didn’t have answers, they ought to consider a less-demanding field.

Nelson took the lesson to heart. By the end of his first year, he decided to study biology and chemistry instead. But then he took a trip to New York and saw a play in which one of the actors was also named Mark Nelson. Something about that made him wonder if he would one day regret his decision not to pursue acting. So he went back to the theater department in Utah,

where he met his future wife, actress Michelle O’Neill, and eventually on to Julliard in New York.

When he graduated in 1994, he got parts in touring shows, in productions on and off Broadway, and in television and films. Aware of the Guthrie Theater’s reputation, he contacted Joe Dowling, who was the new artistic director, and in 1996 was

Mark Nelson at a glance

BORN: Denver, Colorado, 1969

EDUCATION: Three years at the University of Utah; BFA, 1994, Julliard School; MD, 2016, University of Minnesota

RESIDENCY: University of Minnesota North Memorial family medicine residency program

FIRST PROFESSIONAL ACTING JOB: At a small repertory theater in Creede, Colorado

TV APPEARANCES: “As the World Turns” and “Law and Order: SVU”

FAVORITE GUTHRIE PARTS: In “Philadelphia, Here I Come!” playing opposite Rainn Wilson. Also in “The Master Butchers’ Singing Club” because “It was a treat getting to know Louise Erdrich.”

PHOTO COURTESY OF MARK NELSON

Mark Nelson
performing in
"She Loves Me"
at the Guthrie
Theater in 2005.

He was particularly drawn to characters created by Russian playwright-physician Anton Chekhov. "His characters are written with such meticulous detail and love to manifest as complex and interesting people," he says. When Jon Hallberg, MD, a University of Minnesota Medical School faculty member whose patients include local actors and musicians, asked the Guthrie who could help him develop a show on Chekhov for a family medicine conference, Nelson's name was at the top of the list.

Delving even more deeply into Chekhov to create the 2008 show, Nelson began to see him more as a physician than a playwright. And in Hallberg, he saw a living example of a physician who had his hands in the arts. "I started to think I'd like to be a doctor who's got this broad world perspective," Nelson says. He began to think seriously about going to medical school.

Although Julliard had prepared him for the stage, it had not prepared him for the MCAT. He enrolled in the University of Minnesota, and for the next three years spent his mornings doing his prerequisites, his afternoons at rehearsals and his evenings on stage. He finally stopped acting when he started medical school at the university in 2012. He was 43 years old.

Settling into a new role

As if going to medical school wasn't enough (Nelson says it required him to "exercise a part of his brain that hadn't been exercised"), he also had heavy burdens at home. His wife was newly diagnosed with breast cancer, and his daughters were ages 8 and 10. He quickly realized that success in school might look slightly different for him than it would for other students. "Honors for me was going to be about get-



PHOTO BY T. CHARLES ERICKSON

An actor's insight

Perhaps because he struggled to balance his studies with his family responsibilities during medical school, or perhaps because he's just a keen observer of people (he's noticed that other physicians can seem callous, for example), Mark Nelson is concerned about burnout. He says it's "a huge issue in medicine."

The former actor thinks he knows why physicians are prone to burning out. "None of it [practicing medicine] is about what's going on with you," he says. As a result, many physicians are hesitant to open up about their vulnerabilities. "It's not easy for doctors to talk about feeling scared, weak or depressed," he explains. He thinks being involved with the arts could help them do the introspective and expressive work that might stave off burnout. Making art, he says, "is about giving voice to what's going on inside of you." It builds resiliency. "It also helps to cultivate empathy." —C.P.

ting through medical school and having a marriage that works and a relationship with my kids," he says. Figuring out how to do that wasn't always obvious. One semester, he'd barely pass a course and de-

cide to study more. The next, he'd realize he needed to spend more time helping his kids with homework or talking with his wife. "It was a constant struggle," he says.

Despite the challenges, Nelson didn't allow himself to look back during those years. And if he had doubts, he didn't share them, aware that he was asking so much of his family. "I felt like—not that I couldn't question—but I couldn't question idly," he says.

As he moved into his clinical rotations, he began to see that what had made him successful in the theater—his curiosity about characters—would serve him well in medicine. "The big difference is that one is written into a play and one is sitting across from you in a room," he says. "As an actor, you are an advocate for that character. You need to believe fully in why they do what they do. And that's been the huge thing that's translated into medicine." He now advocates for his patients—and that means learning about who they are as well as what brought them to the exam room. "I may not remember the exact name of five diabetes drugs, but I can meet someone once and know their life story," he says.

So now at age 47 as he begins residency in the University of Minnesota's North Memorial family medicine residency program, Nelson is comfortable in a new role that's not fully fleshed out. He thinks he wants to work with underserved patients, he may do some teaching, and he might follow in the footsteps of his literary hero Chekhov and write a play. Yet he's not doubting his decision to leave acting behind. "I don't miss it all," he says. "I know this is the right place for me." MM

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

PHYSICIANS AND PHOTOGRAPHY

THE WINNERS OF OUR ANNUAL PHOTO CONTEST

To practice medicine, one must be an observer—a student of the human as well as the physical condition. Being able to see what may not be obvious to others is also what makes physicians good photographers. They see art and interest in the drape of a curtain, the relationship between a person and their environment, the majesty of nature.

That ability to capture those views, those moments, wasn't lost on the judges of our contest, *Minnesota Medicine* art director Kathryn Forss and

veteran photographer Mike Krivit. With nearly 70 entries from practicing physicians, residents and medical students to consider, they had their work cut out for them.

They selected nine images they felt stood out. "The shots were varied, and many were strong in meaning, technical quality and style. Those we chose were the cream of an exceptional crop," says Forss.

This month, we share the winners. In the coming months, we'll feature other noteworthy entries on our website (www.mnmed.org). Thanks to all who participated.



PHYSICIANS

FIRST PLACE

Snowbird sky

*Steve Tuohy, MD,
anesthesiologist, Abbott
Northwestern Hospital,
Minneapolis*

WHAT INSPIRED THIS

PHOTO: "The photo was taken near the summit of Hidden Peak (11,000 ft.) at Snowbird ski area in Utah. We caught the last chairlift ride up that day and decided to take a well-deserved break at the summit. The amazing depth of field seemed to bring together the snow, sky, clouds and sun perfectly."

JUDGES' COMMENTS:

"Photo is beautifully shot, with a lovely, balanced composition. The dramatic sky and clouds and the rays emanating from the sun give this image real interest. First rate."



PHYSICIANS

SECOND PLACE

Fishing, Lake Calhoun, Minneapolis

Lisa Erickson, MD, reproductive medicine and fertility specialist, Center for Reproductive Medicine, Minneapolis

WHAT INSPIRED THIS PHOTO: “Being in the moment, in the zone; using Hipstamatic where the rules are no editing—one picture, as is.”



PHYSICIANS

THIRD PLACE

Moeraki boulders

Lynn D. Cornell, MD, renal pathologist, Mayo Clinic

WHAT INSPIRED THIS PHOTO: “The Moeraki boulders are large spherical rocks along the beach on the Otago coast of New Zealand’s South Island. Maori legend submits that these formed from cargo expelled from a wrecked canoe.”

RESIDENTS/FELLOWS

FIRST PLACE

Cleaning Preservation Hall

*Maureen Ayers Looby,
MD, June 2016 graduate,
University of Minnesota
obstetrics/gynecology
residency program*

WHAT INSPIRED THIS

PHOTO: “This photo was taken in front of Preservation Hall in the French Quarter in New Orleans. Our family goes to New Orleans every spring to listen to jazz music and enjoy the joyful spirit of the city. This photo reminds me that we should enjoy life, use the resources we are given, and then clean it up and start over.”

JUDGES' COMMENTS:

“This is a thoughtful shot, and shows the effort the photographer put into it. The moment is perfect, and the black-and-white processing fits the subject. Well done.”





**RESIDENTS/
FELLOWS**

SECOND PLACE

Letting go

Annie Burton, MD, June
2016 graduate, University of
Minnesota pain management
fellowship

WHAT INSPIRED THIS PHOTO:
“My kids have a chalkboard
wall in their playroom. My
daughter drew some balloons
with strings attached to them,
and I positioned her so it
looked like she was letting them
go. Photography is a creative
outlet for me, and my kids are
always willing to be my models.”

**RESIDENTS/
FELLOWS**

THIRD PLACE

*La presidenta y
su hijo*

Emily Moody, MD,
medicine-pediatrics
resident, University of
Minnesota

**WHAT INSPIRED THIS
PHOTO:** Doña Berta
is president of the
local women’s group
in Morochata, Bolivia.
She trained as a health
promoter years ago in
Chilimarca. I met her
while I was on an eight-
week global pediatrics



rotation. She showed us some of the projects
that were ongoing in her area. She always had

her youngest child, 1-year-old Yoel, with her on our
walks.”



STUDENTS

FIRST PLACE

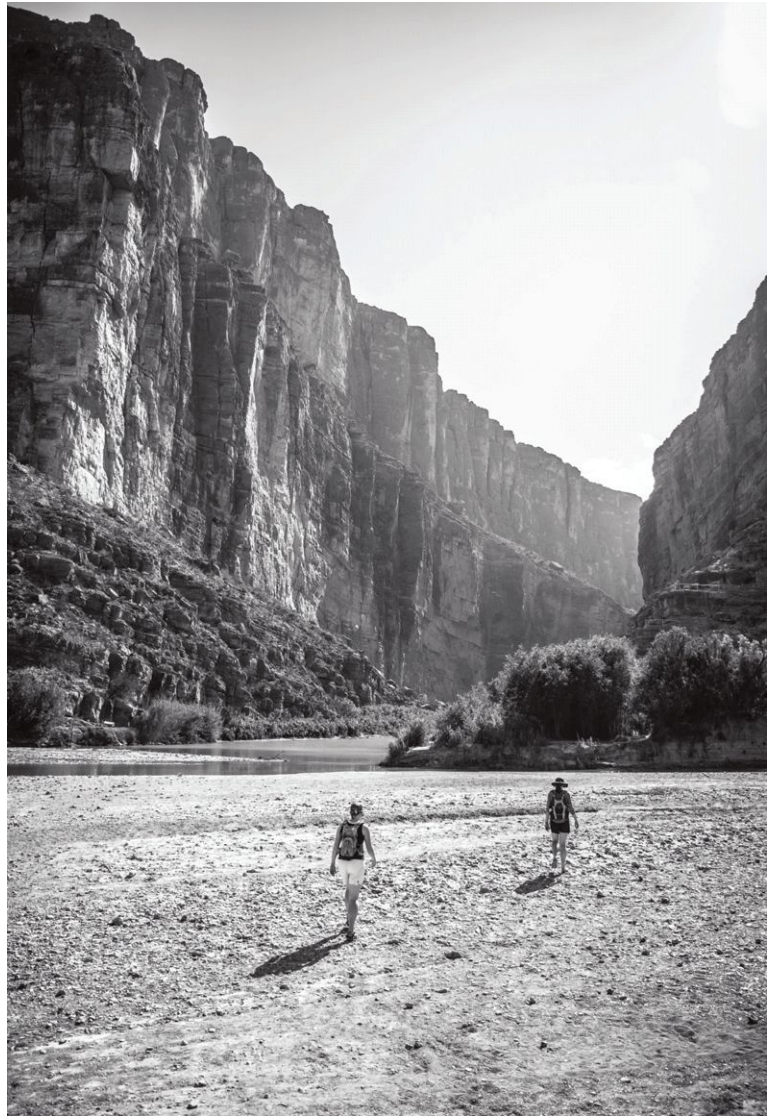
Afternoon drapes

Jennifer Grauberger, Mayo Medical School

WHAT INSPIRED THIS PHOTO: “While adventuring up to the rooftop of an historic hotel in Florence, Italy, I happened upon this window. The afternoon heat and sunlight had pushed it wide open. I was attracted to the stark contrast between the white beam of sunlight bouncing onto the steps and the soft, dark folds of the drapery—as if the curtain was hiding around the corner in fear of the light.”

JUDGES’ COMMENTS:

“Beautifully shot, gorgeous composition. Perfect timing. This is a shot that is lovely to look at and immaculately executed.”



STUDENTS

SECOND PLACE

Onwards!

E. Peek Ehlinger, MD, University of Minnesota Medical School class of 2016 (starting a family medicine residency in Anchorage, Alaska)

WHAT INSPIRED THIS PHOTO: “This was taken on a hiking trip in Big Bend National Park with two of my medical school friends.

We all graduated this year, and so heading into the heat and unknown of the Santa Elena Canyon seemed quite representative of the journeys awaiting us.”



STUDENTS

THIRD PLACE

Appaloosa at Nyanza Farm, Malkerns Valley, Swaziland

Kashmira Chawla, MD, Mayo Medical School class of 2016 (starting general surgery residency at Thomas Jefferson University Hospital in Philadelphia)

WHAT INSPIRED THIS PHOTO:
“When I was on a CDC fellowship, I went riding every weekend at this farm with this horse, Rainbow.”

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CULTURAL CONNECTIONS

Working with patients from other countries and cultures can be both educational and rewarding, as these encounters can change perspectives as well as lives.

That's the case for this year's writing contest winners, who were both touched by experiences with people from different parts of the world. One tells about a vacation to Mexico that served as a reminder that physicians never really take off their doctor hat. The other introduces us to an immigrant family from Ethiopia and describes how a brush with our health care system set their young daughters on the path toward a bright future.

Of the record number of entries we received this year (40!), our judges felt these stories were the strongest and most compelling in their categories. In other words, these were the ones that needed to be shared.

We would like to thank all who entered this year. We will be featuring some of your work in upcoming issues as well as at a Hippocrates Cafe event in September. Also, thanks to our judges, who were tasked with the difficult job of selecting winners: Dominic Decker, MD, Ruth Westra, DO, Charles Meyer, MD, Siu-Hin Wan, MD, and Dan Hauser.

HONORABLE MENTION

Protest poem for a boy with leukemia

Stan McCormick, MD
Hospital Pathology Associates

The cloud

Jamie Santilli, MD
M Health University of Minnesota
Primary Care Center at the Clinics
and Surgery Center, Minneapolis

Living in the moment

Sean Schulz, DO
University of Minnesota Smiley's
Family Medicine Program,
Minneapolis

Assume the vocabulary

Lily Chan
Mayo Medical School



PHOTO BY KATHRYN FORSS

PHYSICIAN WINNER

Our physician winner is Sandra Eliason, MD, a family physician with Fairview Integrated Primary Care Clinic in Minneapolis. She works with patients who have both complex medical and mental health conditions. An English major in college, she spent 10 years writing proposals and presentations for the Center for Cross Cultural Health in Minneapolis while practicing urgent care. More recently, Eliason turned her attention to essay writing, taking classes at the University of Minnesota and The Loft Literary Center.

WHY I WRITE:

"Medicine is full of stories. Each patient encounter, to me, is about learning the patient's story and understanding their condition in relation to their story. Medicine also touches the doctor so personally, teaching us so much about how our presumptions can be erroneous and how what we may want for a patient may not be what the patient wants. If you can understand it from the patient's point of view, it often makes more sense. Their point of view is their story, and those stories need to be told."

ABOUT THIS STORY:

"This was a very personal experience for me at a crucial time. It was both humbling and inspiring. I discovered you can't *not* be a doctor or leave medicine behind. It is part of you, and because of that you have to use it."



THE VACATION

BY SANDRA ELIASON, MD

I had been ruminating over what it meant to be a doctor throughout the four-hour flight. My thoughts were in a loop replaying the past few weeks—office politics, a difficult patient, an angry family. I was one of the few family doctors still seeing patients in the hospital, and my patient went into DTs after surgery, having not revealed his true drinking habits. More and more specialists had become involved, and the family became more upset. I had been questioning my judgement in proclaiming him fit for surgery, as well as my identity as a doctor.

My brooding was interrupted when the plane broke through the clouds and we began the steep descent down the mountainside. I watched out the window as the sea of green palm trees came into view. Pushing my dark thoughts behind, I felt my excitement grow as the plane got low enough for me to pick out familiar landmarks. Sometimes the plane's path would actually take us right over our house.

We had bought the house in Ixtapa, Mexico, shortly after our daughter's wedding to Antonio, when she—and we—really thought it would be her home. I think I was enamored with the possibility of escape when medicine became too much, to have a retirement plan that would take me to a familiar place with family built in. But soon our daughter and her new husband moved to the United States. They left behind the house, his large Mexican family and many acquaintances.

This vacation felt particularly needed, and as we taxied down the runway my funk started to return. I distracted myself by reviewing the lazy days ahead, filled with the prospect of unscheduled time. I wanted to get far away from medicine and patients, and was looking forward to spending time “playing” at our house—doing the necessary upkeep that a home away required, reading and basking in the sun, definitely not thinking about medicine.

We would stop in to see family and friends, of course, and complete the one medically related task I had been assigned: to bring a glucose meter to the father of one of Antonio's friends. He had diabetes and was unable to properly treat it without a meter. I decided to call right away so I could get this over with. I planned one afternoon of giving instructions on the meter.

The following morning, Marco, Antonio's friend, arrived in his dusty pickup truck to take me to his house. We said our hellos,

my conversation feeling jerky as I worked to begin thinking and speaking in Spanish.

Marco explained that his father had been very sick since prostate surgery, having trouble recovering because of his diabetes, and that the glucose meter, *la machina*, would be very helpful for managing his sugar so he could feel better soon. He had recently been discharged from the hospital with antibiotics, I was told, but he was not recovering well. This gave me a little more information, but did not prepare me for what was to come.

We drove well out of town, down palm-lined streets and onto the highway, past roadside stands, orange groves, and into a small community where we turned onto the dirt road that led over the hill to his front gate. I felt relieved that their home was not close, and that they likely would not expect me to return if further care was needed. I could maybe call once to make sure the monitor was working, but otherwise the distance would make it hard to return.

We pulled up to the concrete wall surrounding his rambling home, much larger than those surrounding it. Marco gave a brief honk on the horn as he climbed out of the pickup. Lupita, his wife, opened the iron gate for us. We hugged our hellos, and they led me into the house, to the bedroom at the end of the hall.

Marco and Lupita entered the room first, and motioned for me to follow. I took a step and stopped, shocked into stillness, doing my best to hold my face neutral as I looked on.

Paco, the father, was lying on the bed. He was naked from the waist down, legs spread, and where his abdomen should have been, was an opening from his umbilicus to his symphysis pubis. The skin was flayed apart, fat hanging from either side of the wound. This was not “having a little problem after surgery.” I recognized what it was—wound dehiscence post surgery, probably from infection, left open to heal. There was a surrounding cellulitis, skin blazing red, and that complicating infection was further preventing healing. His scrotum was engorged burying his penis, with a surrounding candida in the groin. The wound was packed with gauze full of serosanguinous drainage. This was a post-surgical reaction to his uncontrolled diabetes. The high sugar environment encouraged the bacterial growth, and the infection, in turn,

increased his blood sugar. Since there was no way to measure his sugar, they had been guessing what to do for his diabetes—thus the request for the meter.

At home, Paco would have been in the surgical ICU, with IVs dripping in insulin and antibiotics, sterile dressings changed by nurses, and a monitor keeping track of his breathing, blood pressure and heart beat. “This is barbaric,” I thought. “How could anyone do this to someone?” But sharing those thoughts would do nothing to help right now, and may be insulting. I felt helpless, but I could not just stand there and stare.

“*Puedo pasar?*” I asked, using the courtesy of asking permission to enter as a way to cover for my reaction.

“*Por favor,*” they responded, and I approached the bed hesitantly. The family gathered around and stood looking at me—Paco’s son Marco, his daughter and Lupita, who had been managing this complex situation as best they could, but were wanting, it seemed, the extra level of care a doctor could provide.

I gave the expected greeting to Paco and his daughter, a display of respect and courtesy. Lupita explained that as the oldest woman in the household, she had been in charge of packing the wound, feeding her father-in-law and trying to manage his medications.

It was apparent they expected me to do something, and not knowing what else to do, I fell back on my training. It’s surprising how easy it becomes to fall into “doctor mode.” Simply wall off emotions and look at the situation clinically and as objectively as possible. First, I took stock of their supplies: regular insulin, a sulfonylurea (older, but sufficient), needles, syringes, alcohol swabs, gauze, gloves and cephalexin. I paused for a moment, took a breath, then, not knowing where else to begin, I did the obvious: I showed them how to use the meter. I carefully used an alcohol swab to sterilize the tip of his finger, then went through the instructions step by step, poking his finger, squeezing it to get a drop of blood onto the test strip, and inserting the strip into the meter. We waited expectantly. His sugar was over 400. I repeated the steps to be sure I did it right, and the result came out the same.

I have spent most of my career as a family doctor. I have managed complex medical diseases, cared for hospitalized patients with all manner of illnesses, treated infections, pronounced death and consoled overwhelmed families, but this was different. To be presented with so many problems all at once, with so few resources and in a foreign language? It felt impossible.

At home I would have the consulting surgeon, an internist or endocrinologist, and probably an infectious disease specialist making the bulk of the decisions, as well as nursing care and unlimited supplies. What I saw here looked meager for treating the situation. And then there was the language and cultural barrier. I knew how we did things in my medical system, and my Spanish was passable, even considered “excellent” for shopping in the market, visiting with people, passing the time of day. But I was not sure it could manage complex medical instructions, or care for such a serious illness.

After much searching for words, my questions began: Tell me about Paco’s surgery and discharge. How long have things been like this? What was he eating? What doses of medication has he been taking? Was he up and around at all? How were they packing the wound? Was he being turned routinely? And finally, what on earth was he doing at home and not in the hospital? The surgeon, I was told, had said that there was nothing more that could be done in the hospital and that Paco would be able to get the same care at home.

The outrageous thing, to me, was that prostate surgery was elective, not urgent. No one in their right mind, I thought, would do surgery on an uncontrolled diabetic. I sighed knowing my opinion on these things did not matter now, and I had to figure out the best way I could help.

I learned that Paco had had a fever of 102; did not feel like eating, only wanting soup, and they were honoring his request, thinking it would help his diabetes; and was staying in bed because being up and around was too painful. The urologist, who had performed the abdominal prostatectomy, visited once a week—he did not feel that having Paco go back to the hospital was an option.

We devised a plan. The family would monitor Paco’s sugar four times a day, and use a sliding insulin scale and the oral medication to lower his sugars. They felt comfortable measuring his insulin doses, and would give the shots as needed. We discussed diet: lots of protein for healing. All the vegetables and soup he wanted. They had been avoiding fat, worried about his cholesterol. Forget cholesterol for now, I said, *frijoles* with lard are OK. They would get him up in a chair a couple of times a day and turn him every two hours; get an antifungal for the groin, and use the antibiotics as directed. Lupita showed me how they changed his dressing and repacked his wound. I wrote down the names of things to get at

(continued on next page)



WRITING

THE VACATION

(continued from previous page)

the *Farmacia*, hoping the words were correct, that the medications I knew were the same in both languages.

And then I said I would come back tomorrow.

It was out of my mouth before I realized I said it. But what else could I do? I knew his care was not my responsibility, but I also knew I could not leave him lying in his bed without bringing whatever skills I had, meager though they felt at the time. “So much for leaving medicine behind,” I thought.

When I returned the next day, Paco’s sugar was in the 250 range. He still didn’t want to eat, didn’t want to get up. But there was no fever, and the redness had stopped spreading. We talked more about diet and sitting in a chair, and I adjusted the insulin schedule based on his numbers.

It was time to talk to Paco about his choices. This was not easy. Mexico can be a fatalistic society where if you try to anticipate death, make arrangements to prepare for it, you are inviting it. But if he did not make some changes in what he was doing, he would die. Trying to be as indirect as I could, I discussed this with Paco. He could choose not to eat, not to get up. But his best chance of healing was a diet high in protein, getting out of bed to avoid blood clots, and turning frequently to avoid bed sores. He understood and thanked me. The next day when I arrived, he was up in a chair, and Lupita told me he had eaten some chicken soup.

Nearly every day for two weeks, I made the trip to round on my patient. I wanted to assure continued improvement with no unexpected setbacks, but mainly a sense of obligation kept me returning. I felt responsible to the family, to my daughter and son-in-law at home, to myself, to live out my values and give what I was capable of giving. There was also, I realized, obligation to my profession—to do what I could to help. Having the knowledge, I realized, I had to use it.

The family managed to keep Paco’s sugar around 150. The redness around the wound began to subside, the swelling had gone down. There were signs the wound was beginning to heal. Paco was up in a chair for a while every day, they told me, and I saw him walking a few times. He began to eat more. By the time I

left for home, the wound was looking better, with less drainage. I knew that the likelihood of his survival was small, but incrementally he was improving.

As my “vacation” was ending, we made plans for his continued care. His family was confident about what they had to do. I said my reluctant goodbyes to Paco and the family and got into Marco’s pickup one last time before boarding my plane for home. I told them I would call frequently to keep abreast of his condition.

This had not been the vacation I had expected, certainly. It had been changed by what I felt was an inescapable obligation to do what I could; and yet, I had also been able to put aside my questioning and do something meaningful. Medicine, it seems, does not allow you to disregard the obligation to use the knowledge you possess; instead, it becomes who you are, filling you, giving you a privilege that few have—to be allowed to share the deepest struggles of another’s life; to be invited to help alleviate pain and suffering. What had started as a sense of obligation had bestowed on me the honor of being received as a stranger in a foreign home, by a helpless man lying naked on his bed, belly opened, with grace and humility.

Perhaps that is what it ultimately means to be a doctor: to simply show up and do what you can because you can. And then the obligation to set aside vacation plans becomes an opportunity to touch peoples’ lives, and allow them to touch yours. ■■■



PHOTO BY KATHRYN FORSS

STUDENT WINNER

Our student winner is Holly Belgum, who recently began her fourth year at the University of Minnesota Medical School. Growing up in Outing, Minnesota, she remembers penning poems and reflections in notebooks while on family trips and riding the bus to elementary school. It's a habit she continues today. "I'm glad to have captured the memories, those little pieces of myself, to read now," she says. "I think I'll feel the same way about my medical school reflections many years from now."

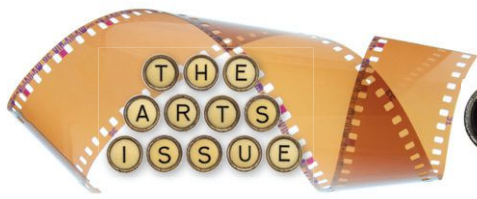
WHY I WRITE:

"I often feel compelled to write late at night, when my brain is still churning with the day's experiences. There are so many things to learn and absorb in medical school, and I think writing allows me to process and reflect, and to re-center myself on the reason I'm here: the patients."

ABOUT THIS STORY:

"As a medical student on rotations, I get to meet remarkable and interesting people every day. This particular family was so warm, so colorful, so determined to do the best for their children, I couldn't help but write about them.

"I didn't know much about Ethiopia before meeting this family, and caring for them required a broader cultural understanding, which took some delving beyond textbooks. Since then, I've been learning a few words or phrases in the languages of the patients I care for so I can at least greet them."



ASHA, ARELLA AND THE AMERICAN DREAM

BY HOLLY BELGUM

Their names were Asha and Arella,* and they were undeniably adorable. At ages 6 and 8, they wore identical pigtails tied with matching beaded hair ties. Taut black skirts stretched across their smooth dark skin as they sat, hip-to-hip, next to their father on the exam room bench. Their striking, widely spaced eyes and sweet full lips mirrored each other as perfectly as their uniform sandals and deep purple tops. Fully present, polite, with an inquisitive openness, they gazed up at me dutifully, patiently. I greeted them and paused for the interpreter to translate. They understood a little, it seemed, although it had only been two months since their move from Ethiopia. They smiled at me. I smiled back, and we proceeded with the well-child visit.

It was the first week of my family medicine clerkship. As a fresh third-year, I had only completed one previous rotation—inpatient psychiatry—and most of my clinical experience prior to medical school was gleaned from working in a children's hospital PICU during a post-college gap year. That being said, I was glad for this opportunity to care for two bright, healthy girls on their way to starting a new school in a new country. For me, this visit teemed with the promise of bright futures and potential.

It was also the last visit of the day, two sisters squeezed in following a long morning and afternoon of complex patients. Right away, we hit a hiccup: the handwritten names on their medical documents didn't match those in our system. Here in the United States, the girls were going by their given names followed by a family surname—while their medical documents followed Ethiopia's tradition of recording their given name, followed by the father's given name, followed by their grandfather's given name. At one point, an "a" was misread as an "o," and after much fluttering of papers and talks with clinic staff, all was straightened out and we proceeded. Then, more chaos: dates cited in their vaccination history didn't align with their birth dates. The dates all seemed off; one even showed that the girls were given a vaccine before birth. Again, a flurry of papers, of questions posed to parents,

translated by the interpreter, silently observed by patient girls in matching clothes. The mystery of the dates was pondered and finally resolved with the understanding that the Ethiopian calendar is actually seven years and some odd months behind ours, the Gregorian calendar. It's 2008 there right now, as if a plane ride could shoot me back through time to my senior year of high school. In Ethiopia, 12 months of 30 days are followed by a 13th month of five or six days. All this was researched and accounted for, until so much time had passed that the visit couldn't be completed. They'd have to follow up after all this was verified—for immunizations, for further assessment.

So we focused on what was pertinent and modifiable—the girls' need for exercise and healthy foods. The doctor showed the parents the girls' growth charts: both were at the 99th percentile for their weight. How many fruits and vegetables do they eat a day? How many minutes do they play outside, run around? The interpreter translated, the parents reported, the girls sat and listened and watched. I absorbed the scene.

"The girls are overweight," the doctor said. "They need more exercise to keep them healthy, and more vegetables and fruits throughout the day. Two hours or less of screen time. No sugary drinks: no pop, no juice. Milk or water only." The interpreter translated, the parents nodded, perturbed, but listening, learning, accepting. The girls listened and watched. And I watched them.

I knew this was necessary and so important to their health. They'd start school soon, and the habits they learned now would affect them moving forward. I knew that we'd follow up in a week to continue giving vaccines and assessing health risks. But after the confusion with the documents and our inability to do much more today, I found the sudden focus on weight a little disheartening. We hear so much about girls and body image—the media's effect on them and their confidence. I watched, somewhat somberly, thinking of how this frank discussion might affect their psychological well-being. I brought out a stack of stickers and distracted the girls, allowing them to choose from pirates or kittens or bright Disney characters. Despite the many options, the two

*Names have been changed



chose identical Dora the Explorer stickers. Dora, wearing purple, like they were. Learning to be bilingual, like they were. Absorbing a new culture, a new language. I thought: absorbing what else?

A week later, my doubts about that day's visit—the confusion with the paperwork, the frank discussion about weight—fell away. Immunizations were sorted, paperwork completed, and Asha and Arella, now in bright matching jumpers, were as wide-eyed and charming as ever. School had started, and they had made friends. Every day, they were eating five full servings of fruits and vegetables; carrots were adored all around. They were exploring the Twin Cities on daily hour-long walks with their mother, and playing outside for an additional hour in the late summer sun. Already, they seemed more energetic: not just patient and present but bubbly, beaming. Bright futures again were on my mind. MM



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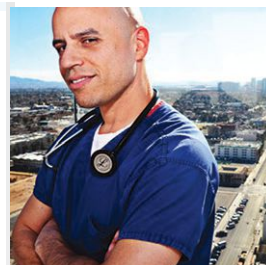
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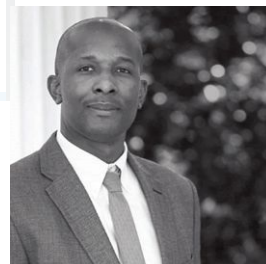
MINNESOTA
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SAVE THE DATE

SEPT
23+24
2016



Zubin "ZDoggMD" Damania, MD



Damon Tweedy, MD

Plans continue for 2016 Annual Conference

It's full steam ahead for this fall's Annual Conference. The MMA is finalizing details for the event to be held September 23 and 24 at the DoubleTree by Hilton in St. Louis Park. Keynote speakers include ZDoggMD, the rapping physician who will discuss and perform about physician burnout and resiliency, and *New York Times*-bestselling author Damon Tweedy, MD, who will focus on health care disparities. In addition, the MMA is looking for:

- Potential topics for its open issues forum to be held September 23. This is your opportunity to bring issues to the attention of the MMA, to discuss concerns submitted by your fellow physicians and get perspective on issues from physicians across the state. You can submit ideas at www.mnmed.org/issues.

- Delegates for the House of Delegates (HOD) meeting on September 24. The HOD will reconvene after a three-year hiatus to decide whether the MMA will continue the governance changes adopted in 2013 and whether any additional changes are needed. If you are interested in serving as a delegate, contact your component medical society, specialty society or MMA section.
- Members to perform in the MMA's Got Talent show on September 23. Please submit a brief video of you performing (singing, playing a musical instrument, telling a joke, juggling, etc.) to dhauser@mnmed.org by July 15.

For more information on the conference, visit www.mnmed.org/AC2016.



Patricia Lindholm, MD, FAAFP

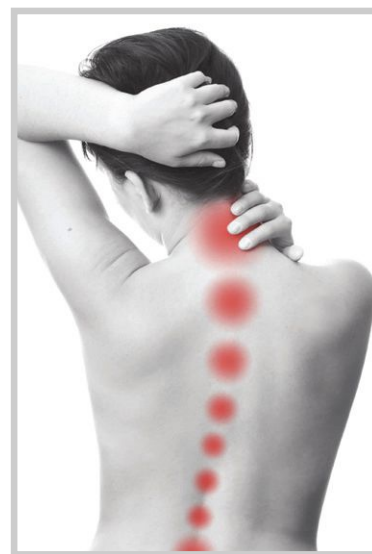
Gov. Dayton appoints two members, reappoints another to BMP

Two MMA-endorsed physicians—Kimberly Spaulding, MD, MPH, and Patrick Townley, MD—have been appointed to the state's Board of Medical Practice by Gov. Mark Dayton. In addition, former MMA President Patricia Lindholm, MD, FAAFP, was

reappointed to the board. All three will serve through 2020.

MMA offers opioid education with 14 free webinars

The nation is in the midst of an opioid epidemic. In an effort to educate medical students, residents and practicing doctors about these medications, the MMA teamed up with the Steve Rummier Hope Foundation and the University of Minnesota Medical School in 2014 to create a series of helpful lectures. Fourteen are now available for CME credit on the MMA website. Take the courses at www.mnmed.org/painseries.



MACRA information available online

The Centers for Medicare and Medicaid Services released its proposed rule in May to implement the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA). MACRA includes new payment models that take effect in 2019. In order to receive payment through these models, physicians will need to comply with new reporting requirements effective January 2017 (the performance year upon which 2019 payments will be based). Details regarding January 2017 reporting will not be known until the final rule is published, likely in October. For more background on MACRA, visit www.mnmed.org/advocacy/Key-Issues/MACRA.

MMA takes part in aspirin initiative

The Minnesota Heart Health Program's Ask About Aspirin initiative aims to prevent at least 10,000 heart attacks and strokes in Minnesota over the next four years by encouraging men and women ages 50 to 69 to ask their health care professional whether they would benefit from taking aspirin daily. The initiative was launched by the Minnesota Heart Health Program and designed by the University of Minnesota Lillehei Heart Institute, in partnership with the University of Minnesota School of Public Health, the Minnesota Department of Health, and a community advisory board, which included representatives from the MMA, American Heart Association, American College of Cardiology (Minnesota Chapter), Minnesota Academy of Family Physicians, MN Community Measurement and Institute for Clinical Systems Improvement. Robert Meiches, MD, MMA CEO, and Juliana Milhofer, policy analyst, represented the MMA at an Ask About Aspirin event at the Mall of America in early June.



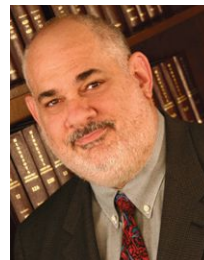
Avera lawsuit continues in Court of Appeals

The Minnesota Court of Appeals once again heard oral arguments on the Avera Marshall litigation in mid-May. Attorneys representing the plaintiffs and MMA members Steve Meister, MD, and Jane Willett, DO, argued that the hospital's unilateral amendment of the medical staff bylaws should not be allowed according to the process for amending the bylaws, which the hospital's administra-

tion and staff agreed to in 2010. In 2014, the Minnesota Supreme Court ruled in favor of the plaintiffs on two of three key points of contention in the suit. The court ruled that a medical staff is a legal entity that may bring suit on behalf of its member physicians, and that bylaws agreed to by a hospital and its medical staff constitute a contract to which both parties must adhere. The Supreme Court did not address the question of whether a hospital could amend medical staff bylaws without approval from the medical staff and sent the case back to the Court of Appeals. The Court of Appeals has 90 days to issue an opinion.

MMA in Action

MMA CEO **Robert Meiches**, MD, and **Mandy Rubenstein**, manager of physician outreach, met with Regional Diagnostic Radiology in Sartell and Riverwood Health in Aitkin in mid-May.



Robert Meiches, MD

Janet Silversmith, MMA director of health policy and member services, met in mid-June with leaders of PrairieCare Institute to discuss MACRA (Medicare Access and CHIP Reauthorization Act of 2015).



Mandy Rubenstein

Silversmith and **Dave Renner**, MMA director of state and federal legislation, presented to the Mankato Clinic Board in April. Renner provided a legislative update and Silversmith discussed MACRA.



Janet Silversmith

Renner, Meiches, and MMA's AMA delegates **Paul Matson**, MD; **Benjamin Whitten**, MD; **Sally Trippel**, MD, MPH; **Dave Estrin**, MD, and **John Abenstein**, MD, MSEE, and alternates **Kathryn Lombardo**, MD, **David Luehr**, MD, **Will Nicholson**, MD and **Cindy Firkins Smith**, MD, attended the AMA House of Delegates in Chicago in mid-June.



Dave Renner

On the calendar

Event	Date	Location
Hippocrates Cafe	Sept. 22	DoubleTree by Hilton, St. Louis Park
2016 Annual Conference	Sept. 23-24	DoubleTree by Hilton, St. Louis Park

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



Douglas Wood, MD
MMA Board Chair

VIEWPOINT

We're not done fighting

During the short legislative session that ended in May, one of the MMA's main priorities—reforming prior authorization for prescription drugs—failed to move. Though disappointing, this was not surprising given that many things had to fall into place in a relatively brief amount of time. Given the rather dismal performance of the Legislature overall in 2016, it does not seem out of the ordinary that our priority failed to advance. So now it is time to think of strategies for the next session.

The MMA Board of Trustees won't make decisions about legislative priorities until this fall, but it's certain that medication prior authorization reform will remain one of them. The pharmacy benefit managers' (PBMs) and health plans' powerful lobbies have so far been successful in opposing hearings on the matter in the House. They contend that the legislation will lead to higher drug prices, but this is not at all certain.

The real point of this legislation is patient protection. As physicians, we are concerned about the barriers prior authorization creates for patients who need prescription drugs. The process also disrupts effective therapy when patients switch health plans. Minnesota physicians already prescribe a higher percentage of generic drugs than physicians elsewhere in the country. But the pricing behavior

of pharmaceutical companies (increasing generic prices twice a year, for example, and charging high prices at launch for new drugs) makes it more difficult for patients to afford needed medications.

Our proposal is not to do away with all prior authorization, but to make it work more effectively. We, and our partners in the Fix PA Now coalition, will continue our efforts to make sure that Minnesotans are not harmed by needless administrative barriers imposed by PBMs and the health plans.

We will also examine other ways in which we can directly address the high cost of pharmaceuticals by improving how we prescribe as part of our MARCH (Minnesota Action to Reduce Costs in Healthcare) campaign. You'll hear more about this as the MARCH task force completes its work. Stay tuned. This fight is not over.

Our proposal is not to do away with all prior authorization, but to make it work more effectively.



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2016

Legislative review

The 2016 Legislative session was a short one, with the House and Senate having only 10 weeks to do their work. Although the initial plan was to address a few key issues, political differences resulted in little progress. Consequently, the MMA was successful with only one of its three key initiatives (maintaining the repeal of the 2 percent provider tax).

Following is a review of the 2016 session and how MMA priorities and other health care-related legislation fared.





MMA priority issues

Reform medication prior authorization (PA)

STALLED

PA reform progressed through the Senate but was never heard in the House. The MMA will continue to advocate for passage in the 2017 session.

Medication PA is an inefficient and potentially dangerous process that delays care, interferes with the physician-patient relationship and is costly in terms of the time physicians spend on it. The administrative costs to physicians and clinics associated with medication PA is now approaching \$83,000 per physician per year (a total of \$950 million annually) in Minnesota.

Maintain the repeal of the provider tax

SUCCESS

Efforts in the Senate to re-instate the 2 percent tax, which funds health care for low-income Minnesotans, were considered early in session but did not advance. The tax is still scheduled for repeal at the end of 2019.

The repeal of the provider tax was enacted in 2011 in anticipation of new federal financing mechanisms for low-income health insurance programs included in the ACA. The provider tax adds to the cost of health care, falls disproportionately on the sick and the revenue it generates too often is used for purposes unrelated to health care.

Strengthen childhood immunization laws

STALLED

Efforts to limit exemptions from mandatory childhood vaccines to medical contraindications failed to gain traction.

Minnesota's childhood immunization laws are among the weakest in the nation. Minnesota allows parents to opt-out for any reason by providing a notarized statement expressing their opposition to vaccines.

Passed legislation

SIGNED BY THE GOVERNOR

Extending use of the All-Payer Claims Database (APCD)

The state's APCD is an important tool for studying health care costs and utilization. The MMA supported efforts to extend its use by the Department of Health until 2019 in order to analyze geographic and population differences in health care utilization and costs, and support quality improvement and patient safety efforts.

Behavioral health clinic funding

Additional funds were appropriated for certified community behavioral health clinics. These clinics coordinate care for individuals receiving mental health treatment across various settings and from different providers.

Family medicine residency program funding

Minnesota is facing a physician shortage, particularly in rural and underserved areas of the state. The Legislature appropriated \$1 million to rural family medicine residency programs in Duluth, Mankato and St. Cloud to support training the next generation of physicians. This money reinstates funding that was cut in 2015.

Funding for Zika research

The Legislature directed the Commissioner of Health to seek additional federal funds for statewide planning, coordination, preparation and response activities related to the Zika virus. These efforts are important to ensure public health readiness, diagnostic testing of patients and surveillance activities.

Health care home recertification

Health care homes must recertify with the Department of Human Services every three years in order to receive Medical Assistance payments. Previously, they had to recertify annually. This change to the law will reduce

Stalled legislation

Medical cannabis registry access

The MMA supported efforts to allow a treating physician to check the state's medical cannabis registry to determine whether a patient was using medical cannabis in order to prevent interactions with prescribed medications. Allowing them access to the medical cannabis registry will provide them with a more complete picture of their patients' health and treatment plans.

MinnesotaCare eligibility

Efforts failed to increase eligibility for MinnesotaCare, the state's subsidized health insurance program, to households with incomes up to 275 percent of the federal poverty level (up from the current level of 200 percent). Another proposal to allow all Minnesotans, regardless of income level, to purchase MinnesotaCare as a "public option" was also defeated. Although expanding access to public health care programs may further decrease the number of uninsured Minnesotans, these proposals would have increased pressure to reinstate the provider

Vetoed legislation

Tobacco taxes

Lawmakers reduced some of Minnesota's tobacco taxes at the request of Big Tobacco. Legislators repealed a stipulation that raised the tax approximately 8 to 10 cents each year.

The tax level on certain e-cigarette products was also reduced. These changes were in the tax bill vetoed by Gov. Dayton.

Tanning bed use by minors

A proposal would have allowed minors to use commercial tanning beds, if prescribed by a



some of the administrative burden associated with recertification.

Health plan provider network changes

Health plans are now required to provide monthly updates on their websites so enrollees know whether providers are in or out of network. Patients need this information in order to be better-informed consumers.

Increased access to naloxone

Naloxone is an effective opioid antagonist. Under the new law, pharmacists will be allowed to dispense naloxone by entering into standing orders with a local public health board's medical consultant or an individual designated by the Commissioner of Health. This law builds on existing authority that allows pharmacists to dispense medications under a standing order with a local physician.

Medical Education Research Costs (MERC) funding

MERC is used to support training programs for physicians and other health care practitioners. An additional \$1 million was appropriated to the MERC fund. This is designed to increase the number of residency slots and address Minnesota's physician shortage.

Osteopathic physicians on the Board of Medical Practice

The BMP will allow more than one of its members to be an osteopath. Previous law limited BMP membership to one osteopath. Having a variety of physicians on the BMP should ensure that all physicians and specialties are represented.

Prescription Monitoring Program (PMP) registration

All prescribers who have a DEA number are required to register with the PMP and create an account. Although use of the PMP remains voluntary, the hope is that mandatory registration will increase the number of

prescribers who use it and, consequently, cut down on the number of patients who visit multiple prescribers to obtain opioids for illicit use.

Unused medication collection

Pharmacies can now collect and dispose of prescription drugs, including scheduled narcotics. Also, family members and caregivers of individuals in long-term care facilities can turn in unused or expired pharmaceuticals to a pharmacy for proper disposal. The goal of this measure is to reduce the volume of unused pharmaceuticals that are being diverted for abuse.

tax, which helps fund MinnesotaCare, and shift costs to private payers.

Primary care reimbursement

Minnesota currently ranks 47th in fee-for-service Medical Assistance and MinnesotaCare reimbursement rates, a scenario that leads to significant cost-shifting to private payers and employers. The MMA supported a Senate proposal to increase Medical Assistance reimbursement by 5 percent for physicians who provide both primary care and mental health services.

Single-payer health care

A Senate proposal to study the viability of a single-payer system in Minnesota failed to gain momentum. The \$500,000 study would have been paid for out of the Health Care Access Fund (HCAF), which is supported by the provider tax. The MMA does not support single-payer health care and strongly opposes use of the HCAF for purposes other than MinnesotaCare.

physician. The MMA opposed this effort to weaken the state's tanning bed law, which prohibits use by minors. Prohibiting their access to commercial tanning helps reduce exposure to a significant carcinogen. Any use of phototherapies should be done in a

physician's office, not a commercial tanning facility.



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HOW TO BE HEARD

It's easy to bring your issues to the MMA



STEP 1

Share your idea
through one of
these nine channels:

- LETTER TO THE MMA
- EMAIL
- CALL THE MMA
- MMA WEBSITE
- LISTENING SESSION AT YOUR CLINIC
- POLICY COUNCIL OPEN-ISSUE FORUM
- CLINIC VISITS
- SPECIALTY SOCIETIES
- COMPONENT MEDICAL SOCIETIES

UPON RECEIPT, YOUR ISSUE PROCEEDS TO STEP 2



STEP 2

Issues are triaged.

- BROAD IMPACT ON MINNESOTA PHYSICIANS?
- WITHIN MMA'S ABILITIES/ EXPERTISE?
- LEGALLY PERMISSIBLE?
- FURTHER INFORMATION NEEDED?
- ALIGNED WITH MMA'S MISSION?

ISSUES WITH THE HIGHEST IMPACT MOVE TO STEP 3



STEP 3

Issues are considered
through one of these three forums:

- POLICY COUNCIL
- STANDING COMMITTEES
- TASK FORCES

IF ONE OF THESE GROUPS ACTS ON YOUR ISSUE, IT PROCEEDS TO STEP 4



STEP 4

Last step! Issues are acted upon
by the Board of Trustees.

- BOARD OF TRUSTEES

**ADOPTED IDEAS
BECOME MMA POLICY**



NEW POLICY!

**SHARING YOUR ISSUE
MADE A DIFFERENCE!**

What Physicians and Patients Need to Know about Zika Virus

BY MATTHEW LOICHINGER, DO

The Zika virus, which was first identified in the 1940s, remained in relative obscurity until 2015, when it was discovered to be infecting large numbers in Brazil. Zika has now entered the consciousness of medical and public health officials around the world as well as the public at large. Although the number of cases of Zika infection in North America is relatively small, experts predict it will grow with international travel. This article reviews what is—and is not—known about Zika infection in the United States and what is projected for the future. It also discusses what physicians and patients need to know about preventing and testing for Zika infection.

Awareness of the Zika virus dates back to 1947, when it was first detected in the blood of a sentinel rhesus monkey in the Zika forest of Uganda.¹ For many years, Zika remained relatively quiet, with a fairly small number of human infections occurring mainly in Africa and Asia. It wasn't until the February 2015 outbreak in Brazil and Central America that the global medical community began to take note of Zika. Since then, the Zika epidemic has garnered attention around the world because of its fast spread and association with pregnancy complications and birth defects. With summer underway and mosquito populations booming, Zika is on the minds of many in the United States, even though infection is not widespread here. This article describes the current state of Zika infection and what physicians and patients need to know about prevention and testing.

The Current Zika Outbreak

The recent Zika epidemic started in March 2015, when a cluster of exanthematous illness was noted in the Bahia state of Brazil.^{2,3} By December 2015, the outbreak had

spread to 14 different Brazilian states with more than 1.3 million cases reported.⁴ As of March 2016, cases have been reported in 33 countries in South, Central and North America.⁵ Figure 1 shows a map of the areas in which active, ongoing local transmission of Zika virus is occurring. The countries in those areas are currently on the Centers for Disease Control and Prevention's (CDC) travel advisory list.⁶ Fortunately, the United States is not on that list. All cases reported here are known

to be travel-related; that is, affected individuals contracted the Zika virus abroad and brought it back. As of June 22, 2016, there were 819 confirmed travel-associated cases in the United States; of those, 19 were in Minnesota.⁷ These numbers are likely to increase as people continue to travel to affected areas and as the CDC, which performs testing for the presence of Zika, catches up on its workload (the turnaround time for test results is currently eight weeks).

FIGURE 1

Areas with active Zika transmission (May 2016)



Image courtesy of the Centers for Disease Control and Prevention

FIGURE 2

Areas of potential Zika outbreak

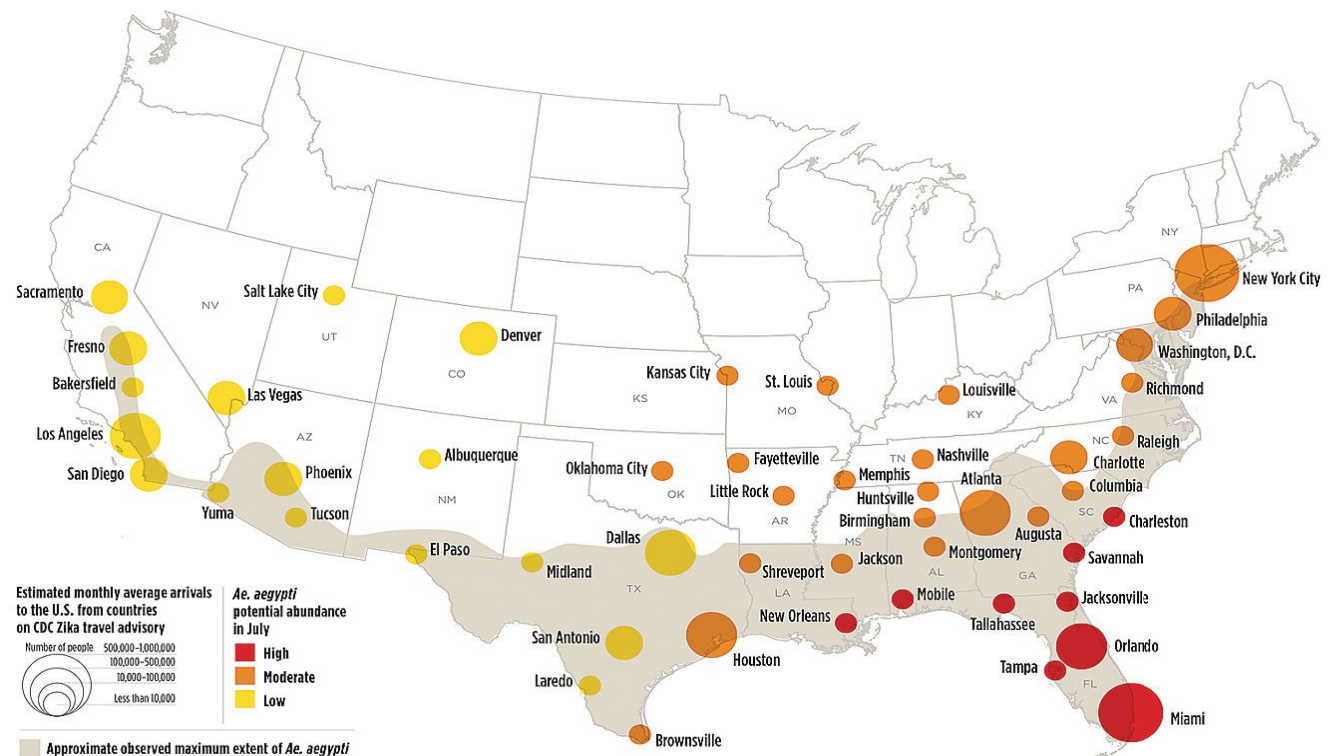


Image courtesy of the National Center for Atmospheric Research (NCAR) - University Corporation for Atmospheric Research (UCAR)

What to Expect

It is safe to say that there are a plethora of unknowns when it comes to Zika virus in the United States. Currently, all predictions for this summer and beyond are based on statistical modeling. These models take into account variables such as historical location and population density of the *Aedes aegypti*⁸ and *Aedes albopictus* mosquitoes, which carry the Zika virus; regional climate; and frequency of arrivals from countries on the CDC advisory list. The map in Figure 2 shows the regions most likely to see a potential outbreak based on these variables. For example, Miami has a high potential for abundance of *Aedes aegypti* mosquitoes as well as a high frequency of incoming travelers from

countries on the CDC travel advisory list. Initially, the South was projected to be the region with the highest potential for Zika infection in the United States. The most recent projection map also shows moderate risk of outbreak up the East Coast. In general, this map closely mirrors the estimated range of the *Aedes aegypti* and *Aedes albopictus* mosquitoes in the United States (Figure 3).⁹ To be clear, these maps do not show where Zika or affected mosquitoes are known to exist. They are only estimates of risk based on statistical modeling. At this time, there does not appear to be a great deal of concern on the part of the CDC about the Zika virus coming to Minnesota. Current modeling projections show that the range of *Aedes albopictus* does encroach on southern Minnesota while the range of *Aedes aegypti* is further south. Although both species have been implicated in past Zika outbreaks, *Aedes*

aegypti is responsible for most of the current transmissions.^{10,11}

Although these projections do not indicate a great need for concern in Minnesota, caution should still be taken. Residents and visitors should take precautions to avoid being bitten by mosquitoes such as wearing long pants and shirts with long sleeves, staying in air-conditioned environments and using Environmental Protection Agency (EPA)-registered insect repellents (those containing DEET, picaridin, IR3535, lemon eucalyptus or para-menthane-diol). All of the EPA-registered insect repellents are considered safe for use by pregnant women.¹²

Unfortunately, a Zika vaccination is not yet available. Pharmaceutical companies

and the National Institutes of Health are currently in the development phase for both a live-attenuated and killed vaccine. They have released statements noting that live-attenuated vaccine development is a slow process and that a vaccine would most likely not be ready for safety trials until next year.¹³

Who to Test?

The CDC currently recommends testing any patient with symptoms of Zika virus who has recently traveled to a country on its travel advisory list. Symptoms to watch for include rash on the upper chest and face, arthralgia, conjunctivitis and fever. Patients do not need to have all of these symptoms; only one is necessary to warrant testing. Zika virus real-time reverse transcription-polymerase chain reaction (rRT-PCR) on serum should be ordered for symptomatic travelers during the first week following the onset of symptoms. Additionally, urine samples should be collected within 14 days of the

How to Counsel Patients

One of the questions I'm frequently asked by patients concerned about Zika is whether they can travel to a country that is on the CDC travel advisory list. As a maternal-fetal medicine specialist, I advise my pregnant patients against doing so. However, for patients who are not pregnant or are not planning a pregnancy, I take a different approach, as there currently are no recommended travel restrictions for these individuals.

If a patient asks about traveling to a country on the CDC's list, make note of whether the patient is of child-bearing age and evaluate their plans for future pregnancy. This is important for several reasons. First, contracting Zika virus can have a significant impact on family planning, as it is currently recommended that women who contract Zika while traveling abroad wait eight weeks following symptom onset before becoming pregnant. Similarly, if a man contracts Zika while abroad, it is recommended that he wait at least six months before fathering a child. In addition, for women of childbearing age who do not want to become pregnant, and who wish to travel to countries on the CDC travel advisory list, a thorough discussion about the ongoing Zika outbreak, adverse pregnancy outcomes associated with Zika and contraceptive use should take place prior to travel. It is also important to remember that Zika can be sexually transmitted. Therefore, patients need to be reminded that protected sex is recommended during pregnancy for women whose male partners have traveled to countries on the travel advisory list.¹²

REFERENCES

- Centers for Disease Control and Prevention. Preconception counseling: for women and men living in areas with ongoing spread of Zika virus who are interested in conceiving. Atlanta (GA): CDC; 2016. Available at: www.cdc.gov/zika/pdfs/preconception-counseling.pdf. Accessed May 27, 2016.
- Society for Maternal-Fetal Medicine and American College of Obstetricians and Gynecology. Practice Advisory: Updated Interim Guidance for Care of Women of Reproductive Age During a Zika Virus Outbreak. Available at: www.acog.org/About-ACOG/News-Room/Practice-Advisories/Practice-Advisory-Interim-Guidance-for-Care-of-Obstetric-Patients-During-a-Zika-Virus-Outbreak. Accessed June 5, 2016.

FIGURE 3

Estimated range of *Aedes aegypti* and *Aedes albopictus* in the United States

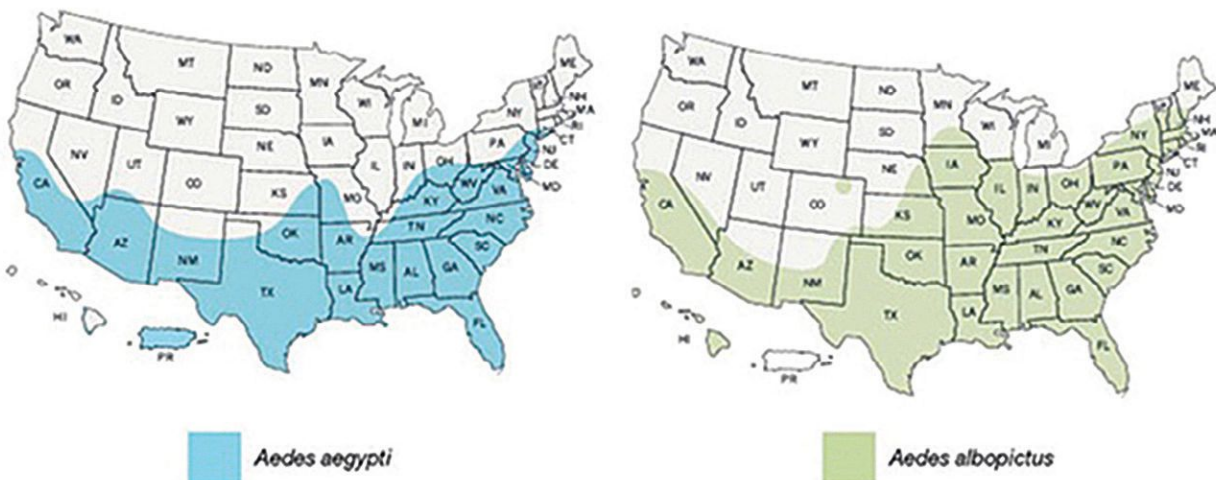


Image courtesy of the Centers for Disease Control and Prevention

onset of symptoms for rRT-PCR testing. If a patient presents more than 14 days after the onset of symptoms, Zika IgM should be performed. No testing is required for asymptomatic travelers.

The recommendations are slightly different for pregnant women. Pregnant travelers who are symptomatic should undergo the same testing as those who are not pregnant. In addition, Zika IgM testing is recommended for all asymptomatic pregnant travelers between two and 12 weeks after their travels. If more than 12 weeks have passed, IgM testing is not needed. In addition to blood testing, pregnant patients also qualify for serial ultrasounds to evaluate fetal head size. There are currently no recommendations as to how frequently these ultrasounds should be done; however, one level 2 ultrasound at 20 weeks and another evaluation between 28 and 32 weeks seem to be sufficient. Additional ultrasound surveillance may be required should concern for microcephaly arise.

All Zika blood testing is performed by the CDC through the Minnesota Department of Health. Detailed instructions for sample collection, order forms and mailing information can be found on the CDC and the Minnesota Department of Health websites (www.cdc.gov/zika and www.health.state.mn.us/divs/idepc/diseases/zika/index.html).

Moving Forward

In the coming months, guidelines and recommendations are likely to change as more information about Zika becomes available. World Health Organization and CDC teams are on the ground in Brazil and other endemic areas conducting important research, especially on pregnant women. As these women begin to deliver their babies, we will learn more about

Zika. In the meantime, many questions remain: What is the vertical transmission rate? What is the rate of adverse fetal outcomes (microcephaly)? How long does Zika last in bodily fluids? Do affected individuals develop immunity? Because information about Zika is likely to change, it is important that physicians and other health care providers stay up to date. The best resource regarding the general management of patients is the CDC website.¹⁴ **MM**

Matthew Loichinger is a maternal-fetal medicine specialist with Minnesota Perinatal Physicians.

REFERENCES

1. Dick GW, Kitchen SF, Haddock AJ. Zika virus.(I.) Isolations and serological specificity. *Trans R Soc Trop Med Hyg.* 1952;46(5):509-20.
2. Campos GS, Bandeira AC, Sardi SI. Zika virus outbreak, Bahia, Brazil. *Emerg Infect Dis.* 2015;21(10):1885-6.
3. Zanluca C, Melo VC, Mosimann AL, Santos GI, Santos CN, Luz K. First report of autochthonous transmission of Zika virus in Brazil. *Mem Inst Oswaldo Cruz.* 2015;110(4):569-72.
4. Hennessey M, Fischer M, Staples JE. Zika virus spreads to new areas—region of the Americas, May 2015-January 2016. *MMWR Morb Mortal Wkly Rep.* 2016;65(3):55-8.
5. Zika virus microcephaly and Guillain-Barré syndrome. Geneva: World Health Organization. Situation Report, March 17, 2016. Available at: http://apps.who.int/iris/bitstream/10665/204633/1/zikasitrep_17Mar2016_eng.pdf?ua=1. Accessed May 30, 2016.
6. Centers for Disease Control and Prevention. Travel health notices. Available at: www.cdc.gov/travel/notices. Accessed May 30, 2016.
7. Centers for Disease Control and Prevention. Zika virus disease in the United States, 2015–2016. Available at: www.cdc.gov/zika/geo/united-states.html. Accessed June 7, 2016.
8. Monaghan AJ, Morin CW, Steinhoff DF, et al. On the seasonal occurrence and abundance of the Zika virus vector mosquito *Aedes aegypti* in the contiguous United States. *PLoS Curr.* 2016;March 16.
9. Centers for Disease Control and Prevention. Vital Signs. Zika and pregnancy. Available at: www.cdc.gov/vitalsigns/zika/infographic.html. Accessed June 7, 2016.
10. Grard G, Caron M, Mombouli IM, et al. Zika virus in Gabon (Central Africa) — 2007: a new threat from *Aedes albopictus*? *PLoS Negl Trop Dis.* 2014;8(2):e2681.
11. Gubler DJ. The global emergence/resurgence of arboviral diseases as public health problems. *Arch Med Res.* 2002;33(4):330-42.
12. Centers for Disease Control and Prevention. Insect repellent use and safety. Available at: www.cdc.gov/westnile/faq/repellent.html. Accessed May 27, 2016.
13. Hayden EC. The race is on to develop Zika vaccine. *Nature News.* 2016;March 28 (doi:10.1038/nature.2016.19634).
14. Centers for Disease Control and Prevention. Zika virus information for healthcare providers. Atlanta (GA): CDC; 2016. Available at: www.cdc.gov/zika/hc-providers/index.html. Accessed May 27, 2016.

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Behavioral Health Boarding in Community Emergency Departments

BY AMY M. O'NEIL, MD, MPH, CHRISTOPHER S. RUSSI, DO, ANNIE T. SADOSTY, MD, AND RONNA L. CAMPBELL, MD, PHD

Increasingly, behavioral health patients are being cared for in emergency departments (EDs). Whether community hospitals have the resources to accommodate these patients is unknown. Our objective in this study was to begin to characterize the capabilities of community hospital EDs with regard to caring for patients with behavioral health problems. To do this, we surveyed 21 community hospitals, all of which are part of Mayo Clinic Health System, using a 21-question electronic survey followed by a telephone interview. Twenty hospitals responded. Nine of 18 EDs (50%) had dedicated rooms for behavioral health patients. Five of 18 (28%) had access to 24-hour security personnel. Psychiatric consulting services were unavailable in four of 19 sites (21%). Nurses in 16 of 18 EDs (89%) were responsible for locating inpatient psychiatric beds for patients in need. Behavioral health patients were transferred to intensive care units or medical units at eight of 20 facilities (40%) while awaiting admission. These community EDs have limited space, staff and resources to care for increasing numbers of behavioral health patients.

In Minnesota, 20% of residents live with some form of mental illness.¹ For those with acute or severe illnesses, getting needed care is a challenge. Often, the access point for care is the emergency department (ED).

Emergency department visits for behavioral health concerns have increased significantly, while the number of inpatient psychiatric beds in the state has decreased in recent years.²⁻⁴ Between 1995 and 2005, ED visits by behavioral health patients increased by 24%.⁵ Between 2005 and 2010, the number of inpatient psychiatric beds in Minnesota decreased by 56%.⁶ Because of the shortage of psychiatric beds, patients with behavioral health problems are experiencing prolonged ED stays. Caring for them requires a significant amount of limited resources.⁷

Patients who must wait in the ED for a prolonged time are said to be “boarding.” The American College of Emergency Phy-

sicians uses the term to describe “a patient who remains in the emergency department after the patient has been admitted to the facility but has not been transferred to an inpatient unit.”⁸ In the interest of patient safety and quality of care, the Joint Commission recommends that boarding times not exceed four hours.⁹

The boarding of behavioral health patients in EDs in academic medical centers has been well-documented in the literature,^{4,10-12} however, little is known about boarding such patients in community hospitals. The objective of this study was to begin to characterize the state of behavioral health care in EDs in community hospitals and to assess whether these hospitals have the resources they need to adequately provide it.

Materials and Methods

The focus of this study was Mayo Clinic Health System, a single integrated health

system with 21 community hospitals. These hospitals are located in three states (Minnesota, Iowa and Wisconsin); 10 of the hospitals (47.6%) are designated as Critical Access Hospitals, one is a Level II trauma center and two are Level III trauma centers. Their combined annual patient volume is approximately 320,000.

A 21-question electronic survey (SurveyMonkey) was distributed to the ED nurse managers or directors of social work at each site. These individuals were selected to participate because they are directly involved with behavioral health patients who are evaluated in the ED.

Two to three weeks after the survey was sent, the contact person at each site was interviewed by telephone. During the call, responses were reviewed and the contact person was asked his or her opinion about the most significant concerns associated with the management of behavioral health patients at their facility. If the designated

individual at a site did not respond to the electronic survey, he or she was still contacted by telephone and survey responses were elicited at that time. Each phone interview was scripted (see Appendix), and the interviews were recorded for future data extraction.

The survey contained questions about site demographics, including the number of annual ED visits, total number of ED beds, presence of designated behavioral health ED beds, ED staffing (staffed by physicians, advanced practice nurses or physician assistants, or both), and number of inpatient psychiatric beds. The survey also included questions specific to behavioral health patient visits: about the longest period of time a behavioral health patient had stayed in the ED, the farthest

distance behavioral health patients were transferred, the location at which behavioral health patients awaited transfer and the most common barriers to transfer. In addition, it asked about the site's resources for providing behavioral health care, including the availability of consulting services, additional staff to coordinate bed placement, security personnel and social work staff.

This study was reviewed and granted exemption by the Mayo Clinic Institutional Review Board.

Results

Representatives from 20 of the 21 hospitals responded to the electronic survey, took part in the follow-up phone interview or both (response rate, 95%). Fifteen com-

pleted both the electronic survey and the follow-up phone interview, two completed only the survey and three completed only the follow-up phone interview. One facility was contacted by email on three occasions but did not participate.

Table 1 summarizes demographics for each hospital in the delivery network. Annual ED visits at each site ranged from 1,388 to 33,616. Seventeen sites had fewer than 20,000 patient visits annually, and 11 sites had fewer than 10,000 visits a year. Twelve of the 21 sites (57%) had the federal designation of Critical Access Hospital. Three of the hospitals (19%) had designated inpatient psychiatric beds within the facility. The longest estimated length of stay for boarding behavioral health patients ranged from five to 36 hours (mean:

TABLE 1

Health system site demographics

SITE	POPULATION OF CITY	NO. OF ED PATIENTS YEARLY	NO. OF ED BEDS	CRITICAL ACCESS HOSPITAL	ED STAFFING MODEL	NO. OF INPATIENT PSYCHIATRIC BEDS AT FACILITY	DISTANCE TO NEAREST PSYCHIATRIC HOSPITAL (MILES)
A	17,967	14,668	9	No	MDs and APPs*	0	23
B	24,834	17,604	22	No	MDs and APPs	14	0
C	4,086	2,992	2	Yes	MDs and APPs	0	34
D	10,589	10,816	3	No	MDs	0	51
E	5,048	2,728	1	Yes	MDs and APPs	0	48
F	39,528	30,472	30	No	MDs and APPs	0	28
G	7,401	7,120	4	Yes	MDs	0	36
H	25,570	NA [†]	12	No	MDs and APPs	0	42
I	16,472	11,616	10	No	MDs	0	47
J	2,138	1,388	2	No	APPs	0	28
K	4,607	2,824	4	Yes	MDs and APPs	0	35
L	2,513	3,200	7	Yes	MDs	0	43
M	9,477	4,212	5	Yes	APPs	0	28
N	3,425	8,240	6	Yes	MDs and APPs	0	32
O	3,560	1,992	4	Yes	APPs	0	25
P	66,623	30,304	26	No	MDs and APPs	20	0
Q	51,719	33,616	22	No	MDs	16	0
R	16,301	12,776	12	Yes	MDs and APPs	0	24
S	1,711	1,860	5	Yes	MDs and APPs	0	24
T	9,602	9,288	12	Yes	MDs	0	28
U	8,118	11,000	12	Yes	MDs	0	54

*Advanced practice provider (nurse practitioner or physician assistant); † Data not available

17.6 hours). The median distance for the farthest interhospital transfer for inpatient behavioral admission was 259 miles (range, 25 to 384 miles, interquartile range, 176 to 296 miles).

Table 2 summarizes the resources available and the approaches to behavioral health care in the ED at each site. Nine of 18 (50%) hospitals had EDs with designated behavioral health rooms—that is, they were designed for patient and staff safety. Security personnel were available 24 hours a day at five of 18 facilities (28%); three of 18 (17%) had part-time security present. Two of 18 sites (11%) used maintenance staff with training in management of violent patients as needed. Eight of 18 sites (44%) relied on local law enforcement to come to the ED if a patient became violent.

In 60% of facilities (12 of 20), behavioral health patients who had prolonged lengths of stay remained in the ED and were monitored by staff or video while awaiting inpatient admission. On-duty ED nursing staff were responsible for locating an appropriate inpatient bed in 16 of 18 facilities (89%). During business hours, eight of 18 facilities (44%) relied on a social worker to assist with locating an inpatient psychiatric bed. Psychiatric consults were not available at 21% of the sites; 32% had access to on-call psychiatrists; and 74% had access to other providers (social workers or psychiatric nurses) either solely or in addition to psychiatrists.

Interfacility transfers were provided by emergency medical services with some exceptions. Eleven of 17 facilities (65%) relied on law enforcement to transport patients if emergency medical services was

unavailable or the patient was too violent to be transported by local emergency medical services.

Discussion

This study provides a detailed analysis of the resources available to EDs in Mayo Clinic Health System community hospitals. The amount and type of resources available for caring for behavioral health patients in the ED varied across the system. Frequently, they were inadequate.

Other studies have addressed the risks associated with caring for behavioral health patients.^{13,14} Our study showed that both patients with behavioral health problems and staff members caring for them are at risk of being harmed during the course of care. Half the sites in this study did not have rooms ideally equipped to ensure safety (eg, limited medical equipment, tempered glass and video monitoring); 73% did not have 24-hour security available. In those facilities without 24-hour security, staff in other areas of the hospital, including maintenance staff, were sometimes asked to provide security if a patient was violent. Alternatively, law enforcement personnel were sometimes called on to provide security.

A second concern is that some community hospitals lacked the personnel needed to perform administrative tasks (such as seeking an inpatient bed for the patient) or provide one-to-one care. The median length of stay for behavioral health patients before transport to inpatient psychiatric care was 20 hours. EDs are designed for immediate assessment and acute care and not for the management of long-term patients. Without staff to provide ongoing monitoring and care, behavioral health patients who board in the ED may not get medications they need or be reassessed and thus may be at risk for poor outcomes.^{11,12} In 89% of surveyed facilities, the ED nurse reported that finding inpatient psychiatric beds for behavioral health patients diverted staff who otherwise would provide direct patient care. In addition, in 45% of facilities, behavioral health patients seen in the ED were transferred to inpatient medical unit beds or intensive care

TABLE 2

Community hospital ED behavioral health resources

RESOURCES	NO. OF FACILITIES WITH RESOURCE/ NO. OF FACILITIES RESPONDING	% (95% CI)
Safety		
Designated behavioral health rooms	9/18	50 (29-71)
Security presence: 24 hours	5/18	28 (12-51)
Security presence: part-time	3/18	17 (6-39)
Ancillary staff security	2/18	11 (3-33)
Local law enforcement	8/18	44 (25-66)
Patient care		
Monitored in ED while boarding	12/20	60 (39-78)
Monitored in inpatient bed while boarding*	8/20	40 (22-61)
Inpatient psychiatry at facility	3/21	14 (5-35)
Social worker identifies inpatient bed	8/18	44 (25-66)
ED nurse identifies inpatient bed	16/18	89 (67-97)
Consulting[†]		
On-call psychiatry consultation available	6/19	32 (15-54)
Ancillary behavioral health provider available	14/19	74 (51-88)
No psychiatry consultation available	4/19	21 (9-43)
Transportation		
EMS	6/17	35 (17-59)
EMS or law enforcement	11/17	65 (41-83)

*In intensive care unit or general medical unit. [†]Some facilities had both on-call psychiatry and ancillary behavioral health services available for consultation.

unit beds to await transportation. This limits access to care for other patients requiring hospital-based treatment.

Distance to inpatient psychiatric care is another issue of concern. When an inpatient behavioral health bed was identified, the patient often had to be transferred a great distance.

This study has several limitations. First, not all information was provided by each site. Second, the information was obtained from each ED supervisor, and raw data were unavailable for verification. In addition, this study involved one health system and most of its facilities were in a rural setting. Therefore, the findings may not be generalizable to urban systems.

Conclusion

Providing safe and timely psychiatric care in the ED is a challenge. In community hospital EDs, the resources available to care for behavioral health patients are variable but generally limited. One thing that might be done to ease the pressure on these facilities is to create a centralized admission or transfer-coordinating service to facilitate the placement of behavioral health patients who present to the ED. Another is to avoid unnecessary hospital admissions by ensuring that patients with behavioral health needs have access to social workers and psychiatric consultation long before they ever arrive in an ED. **MM**

Amy O'Neil, Christopher Russi, Annie Sadosty and Ronna Campbell are with the department of emergency medicine at Mayo Clinic.

REFERENCES

- Minnesota Hospital Association. Policy and advocacy: mental health. Available at: www.mnhospitals.org/policy-advocacy/priority-issues/mental-health. Accessed May 3, 2016.
- Handel DA, Sklar DP, Hollander JE, Asplin BR, Hedges JR; Institute of Medicine/Association of American Medical Colleges Panelist Group; Society for Academic Emergency Medicine; Association of Academic Chairs in Emergency Medicine Panel. Executive summary: the Institute of Medicine report and the future of academic emergency medicine: the Society for Academic Emergency Medicine and Association of Academic Chairs in Emergency Medicine Panel: Association of American Medical Colleges annual meeting, October 28, 2006. *Acad Emerg Med*. 2007;14(3):261-7.
- Blumstein H, Singleton AH, Suttentfield CW, Hiestand BC. Weekday psychiatry faculty rounds on emergency department psychiatric patients reduces length of stay. *Acad Emerg Med*. 2013;20(5):498-502.
- Nicks BA, Manthey DM. The impact of psychiatric patient boarding in emergency departments. *Emerg Med Int*. 2012;2012:360308. Epub 2012 Jul 22.
- Nolan JM, Fee C, et al. Psychiatric Boarding Incidence, Duration and Associated Factors in United States Emergency Departments. *J Emerg Nurs*. 2015;41(1):57-64.
- Treatment Advocacy Center. No room at the inn: trends and consequences of closing public psychiatric hospitals, 2005-2010. Available at: http://tacreports.org/storage/documents/no_room_at_the_inn-2012.pdf. Accessed May 6, 2016.
- Kutscher B. Bedding, not boarding: psychiatric patients boarded in hospital EDs create crisis for patient care and hospital finances. *Mod Healthc*. 2013;43(46):15-7.
- American College of Emergency Physicians. Clinical and practice management: definition of a boarded patient. Available at: www.acep.org/Content.aspx?id=75791. Accessed May 6, 2016.
- Joint Commission on Accreditation of Healthcare Organizations. Approved: standards revisions addressing patient flow through the emergency department. *Jt Comm Perspect*. 2012;32(7):1,3-5.
- Simpson SA, Joesch JM, West II, Pasic J. Who's boarding in the psychiatric emergency service? *West J Emerg Med*. 2014;15(6):669-74.
- Singer AJ, Thode HC Jr, Viccello P, Pines JM. The association between length of emergency department boarding and mortality. *Acad Emerg Med*. 2011;18(12):1324-9.
- Sri-On J, Chang Y, Curley DP, et al. Boarding is associated with higher rates of medication delays and adverse events but fewer laboratory-related delays. *Am J Emerg Med*. 2014;32(9):1033-6.
- Daniel C, Gerditz M, Elsom S, Knott J, Prematunga R, Virtue E. Feasibility and need for violence risk screening at triage: an exploration of clinical processes and public perceptions in one Australian emergency department. *Emerg Med J*. 2015;32(6):457-62.
- National Collaborating Centre for Nursing and Supportive Care (UK). Violence: the short-term management of disturbed/violent behaviour in in-patient psychiatric settings and emergency departments. London: Royal College of Nursing (UK); 2005 Feb.

APPENDIX

Questions from telephone interview script

- What is the total number of annual ED visits at your site?
- How many ED beds does your site have?
- Does your site have designated behavioral health beds within the ED and, if so, how many?
- What is the longest length of stay in your site's ED for a behavioral health patient?
- Does your site have inpatient psychiatric beds?
- If so, how many adult and pediatric psychiatric beds does it have?
- What is the farthest location to which you transfer behavioral health patients?
- Do you track your external transfers and, if so, how?
- Where are behavioral health patients who are awaiting admission monitored (ED, ICU, medical unit)?
- When an inpatient bed is unable to be identified, is the patient held in an alternate location (ICU, medical unit, other)?
- What type of ED providers do you have (physicians, APP,* both)?
- If the ED provider wants additional evaluation, such as a psychiatric consultation, is there someone available to assist?
- If additional assistance is available, who provides the assistance (psychiatric physician, psychiatric nurse, psychologist, social worker)?
- How is this assistance provided during regular hours (in person, teleMD, staffed on phone)?
- How is this assistance provided after hours (in person, teleMD, staffed on phone)?
- Who facilitates bed requests for admitted behavioral health patients (social worker, unit clerk, nurse, other provider)?
- If behavioral health patients are discharged to home, is a safety contract used?
- If a safety contract is used, in what form is it (written, oral)?
- Please summarize the steps of care for a behavioral health patient from presentation to disposition from the emergency department.

*Advanced practice provider (nurse practitioner or physician assistant)

Sudden Unexpected Infant Deaths in Minnesota

Informing Prevention Strategies

BY NAOMI THYDEN, MPH, MARIAH QUICK, MPH, MARK KINDE, MPH, AND JON ROESLER, MS

Sudden unexpected infant deaths (SUIDs) are a leading cause of infant mortality in Minnesota, and many of these deaths could be prevented. This article describes the 2014 SUID rate in Minnesota across subpopulations as well as the prevalence of risk and protective factors for SUID. It also discusses opportunities for SUID prevention.

Sudden unexpected infant death (SUID) is the third leading cause of infant mortality in Minnesota and the leading cause of infant mortality among American Indians in the state.¹ SUIDs include deaths from unknown causes, sudden infant death syndrome (SIDS), sleep-related suffocation and other sleep-related causes.

The SUID rate in the United States decreased substantially after the American Academy of Pediatrics (AAP) changed its safe sleeping recommendations in 1992 and the NIH launched its Back to Sleep campaign in 1994. The rate plateaued, then began decreasing slightly starting in 2009. Improved death scene investigations have revealed that many deaths that once may have been attributed to SIDS are the result of unknown causes or suffocation.² Extensive research has identified risk and protective factors for SUIDs; these inform the AAP's most current recommendations.³

A priority in the Minnesota Department of Health's Infant Mortality Reduction Plan for Minnesota is to further reduce the rate of SUID in the state.¹ With that in mind, health department epidemiologists set out to better characterize SUIDs in Minnesota. We assessed maternal demographics, categorization of SUID cases and safe sleep factors. In this article, we report

our findings and provide recommendations for preventing SUIDs in the state.

Methods

We identified cases of SUID involving Minnesota residents younger than 1 year of age who died in 2014 using a definition developed by the CDC for its SUID Case Registry* (infant deaths that occur suddenly and unexpectedly, and whose cause is not immediately known prior to investigation). Data for each SUID case were obtained from birth certificates, death certificates, law enforcement reports, autopsy reports, death scene investigations and medical records entered into the national Child Death Review Case Report System.

The SUID cases were categorized according to a classification system developed for the CDC registry. That classification system "recognizes the uncertainty about how suffocation or asphyxiation may contribute to death and that accounts for unknown and incomplete information about the death scene and autopsy."⁴ We used the AAP's definition of a safe sleep

environment (one in which the infant is in a supine position on a firm sleep surface that is free of loose bedding, soft objects and other people) when calculating the incidence of SUID cases related to the sleep environment. Adequate prenatal care was defined as nine or more visits during pregnancy, to be consistent with previous analyses done using the CDC's SUID Case Registry.

We calculated SUID rates per 10,000 births in 2014 for certain demographic groups and for the presence of certain risk or protective factors. Race was determined by the mother's race on the infant's birth certificate.⁵ Data from the 2012 Minnesota Pregnancy Risk Assessment Monitoring System were used to determine smoking rates during pregnancy.

Findings

Demographics

We identified 53 cases of SUID in Minnesota in 2014 for an overall rate of 7.6 deaths per 10,000 infants (children younger than 1 year of age). The youngest infants were especially at risk, with 45 of the cases (85%) occurring in the first 6 months of life. Infants with younger mothers were also at higher risk for SUID. Those with mothers 15 to 19 years of age had a SUID rate of 29.5 per 10,000 births; those with mothers 20 to 24 years of age

*The SUID Case Registry was created by the Centers for Disease Control and Prevention (CDC) in 2010. Minnesota is one of 16 states and two jurisdictions in the United States that are funded to participate in the registry.

had a rate of 14.8 per 10,000 births; and those with mothers 25 years of age and older had a rate at or below the overall rate of 7.6 per 10,000 births. SUID rates were found to be higher among black and American Indian mothers than among white and Asian mothers (Table 1).

Sleep Environment

Fifty-two of the 53 SUID cases occurred in a sleep environment. Of the deaths that took place in a sleep environment, 63% of infants (n=33) had been sharing a sleeping surface with another person (Table 2). Eighty-five percent of infants (n=44) were using soft bedding such as pillows or blankets. More than half (54%, n=28) of the cases occurred when the infant was sleeping in an adult bed. The position in which the child was put to sleep was documented in 41 cases. Of those cases, 58% of the infants were placed on their back

(n=23), 33% were placed on their stomach (n=13) and 13% were placed on their side (n=5). Of the cases in which sleep position was reported, 38% (n=15) changed position from that in which they were initially placed to that in which they were found. Every sleep-related SUID case for which there was information about the scene (n=51) involved either soft bedding in the sleep environment or sharing a sleep surface; half the cases involved both.

Fourteen of the SUID cases (26%) were categorized as having “incomplete case information” or “no autopsy or death scene investigation” according to the CDC’s classification system. Eighteen (34%) were classified as “unexplained: unsafe sleep factors,” nine (17%) were “unexplained: possible suffocation with unsafe sleep factors” and 12 (23%) were “explained: suffocation with unsafe sleep factors.” No cases

were categorized as involving “no unsafe sleep factors.”

Other Risk and Protective Factors

Sixty-six percent of the mothers (n=35) in the 53 SUID cases had received adequate prenatal care, and 68% (n=36) had initiated prenatal care in the first trimester (Table 2). The SUID rate varied according to the trimester in which prenatal care began. The rate per 10,000 births for mothers who began receiving prenatal care in the first trimester was 6.6, it was 11.5 for those who began care in the second trimester and 16.2 for those who first received care starting in the third trimester.

Thirty-six percent (n=19) of the mothers whose infants died as a result of SUID smoked during the last trimester of pregnancy, as compared with 12% of all new mothers of infants in Minnesota in 2012. Sixty-eight percent (n=36) of mothers among the SUID cases had ever breast fed their infant.

TABLE 1

Rate of SUID by mother’s race (2014)

Mother’s race	Number of SUIDs	Number of birth mothers in Minnesota in 2014	Rate per 10,000 births
White	29	52,526	5.5
Black	17	7,885	21.6
American Indian	4	1,293	30.9
Asian	2	5,543	3.6
Other	0	2,282	0
Unknown	1	387	25.8
Total	53	69,916	7.6

TABLE 2

Risk and protective factors in 2014 Minnesota SUID cases

Sleep-related factors (N=52)	Yes	No	Missing
Shared a sleep surface	33 (63%)	19 (37%)	0 (0%)
Used soft bedding	44 (85%)	0 (0%)	8 (15%)
Placed infant on side or stomach	18 (35%)	23 (44%)	11 (21%)
Unsafe sleep environment	52 (100%)	0 (0%)	0 (0%)
Other factors (N=53)			
Infant ever breastfed	36 (68%)	15 (28%)	2 (4%)
Mother received adequate prenatal care	35 (66%)	15 (28%)	3 (6%)
Smoked during pregnancy	23 (43%)	28 (53%)	2 (4%)

Discussion

The AAP expanded its recommendations for preventing sleep-related deaths in 2011. The new recommendations include supine sleeping, room sharing without bed sharing, using a firm sleep surface, avoiding soft bedding, reducing exposure to tobacco smoke, and breast feeding.³ In 2014, there was not a single sleep-related death in Minnesota in which the infant was found in a safe sleeping environment as defined by the AAP. More specifically, every case involved either soft bedding or a shared sleep surface.

We determined that an adequate autopsy and death scene investigation were performed in three out of every four Minnesota SUID cases. Of those cases with adequate information, about a third were categorized as “explained: suffocation with unsafe sleep factors,” which means there was strong evidence for suffocation without competing causes of death. In the remaining cases, there were competing causes of death, conflicting witness accounts, inadequate detail about the scene investigation or uncertainty about whether

the unsafe sleep environment contributed to the death.

Physicians and other health care providers who come in contact with parents of infants and expectant parents have an opportunity to discuss safe sleep practices and the reasons for them. Our review of medical records from SUID cases suggests that parents often receive a clear message about placing infants to sleep on their backs but less clear messages about the dangers of bed sharing and soft bedding. Several parents mentioned that they knew a bed was not safe for infants, so they placed pillows around the infant to prevent them from falling off. Parents of one infant who died suddenly and unexpectedly after being placed on his stomach told death scene investigators that they thought they were following their provider's recommendation for "tummy time."

In addition to increasing and targeting education about safe sleeping practices, policy changes could help prevent SUIDs. The large disparities in SUID rates by race is a notable finding. The number of American Indians and Asians in our study was small. However, the magnitude of the disparities between the rates of SUID for these groups and others are consistent with what we have measured in the past. A limitation of this study is that data were only available for the mother's race. Including the father's race may have affected the SUID rates by race. The Advancing Health Equity in Minnesota Report to the Legislature identifies health disparities, such as those that affect infants of color, and recommends changes that address institutional discrimination and social determinants of health.⁶ Smoking during pregnancy has been consistently identified as a risk factor for sudden infant death,⁵ and policies that support preventing tobacco use and smoking cessation are important to preventing SUIDs.

Conclusion

All infant deaths are tragic, especially those that could have been prevented. Many factors affect a baby's risk of SUID including social determinants of health, a caregiver's understanding of safe sleep

practices and ability to consistently provide a safe sleep environment, and exposure to tobacco. Public health, law enforcement, health care practitioners and other community members all have roles to play in addressing these issues and helping parents make Minnesota a safer place for babies. **MM**

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REFERENCES

1. Minnesota Department of Health. Infant Mortality Reduction Plan for Minnesota. March 2015. Available at: www.health.state.mn.us/divs/cfh/program/infant-mortality/content/document/pdf/infantmortality.pdf. Accessed March 29, 2016.
2. Shapiro-Mendoza CK, Tomashek KM, Anderson RN, Wingo J. (2006). Recent national trends in sudden, unexpected infant deaths: more evidence supporting a change in classification or reporting. *Am J Epidemiol.* 2006;163(8):762-9.
3. Moon RY. SIDS and other sleep-related infant deaths: expansion of recommendations for a safe infant sleeping environment. *Pediatrics.* 2011;128(5):e1341-67.
4. Shapiro-Mendoza CK, Camperlengo L, Ludvigsen R, et al. Classification system for the sudden unexpected infant death case registry and its application. *Pediatrics.* 2014;134(1):e210-9.
5. Mathews TJ, MacDorman MF, Thoma ME. Infant Mortality Statistics From the 2013 Period Linked Birth/Infant Death Data Set. *National Vital Statistics Reports.* August 2015; 64(9). Accessed March 29, 2016.
6. Commissioner's Office, Minnesota Department of Health. Advancing Health Equity in Minnesota Report to the Legislature. February 2014. Available at: www.health.state.mn.us/divs/chs/healthequity/. Accessed March 29, 2016.



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About this section

Each year, *Minnesota Medicine* highlights research and clinical work undertaken by Minnesota medical students, residents and fellows. The goal is to not only showcase the good work these medical trainees are doing but also to inform readers about pertinent topics.

This year, nearly 30 trainees submitted brief papers describing original research or interesting cases. The manuscripts were evaluated with regard to these and other questions: Did the authors provide an adequate description of the case or the problem? Was their methodology sound? Did they conduct an adequate review of relevant scientific literature? Do the findings or does the case have implications for practice or further research? The reviewers selected five submissions for publication in this issue.

We thank both those who submitted their work and our reviewers: Angela Buffington, PhD; Peter Kernahan, MD, PhD; Zeke McKinney, MD, MHI, MPH; and Barbara Yawn, MD.

Usually, This Works: When Opioid Escalation at the End of Life Harms Patients

BY ANN M. HOFF, MD, FACEP

As dying patients enter their final days, they may appear uncomfortable and the cause of their distress may not be clear. Intensifying opioid therapy is a common practice in this situation. Occasionally, this can lead to opioid-induced neurotoxicity (OIN), a syndrome characterized by the neuroexcitatory effects of opioids, including hyperalgesia, agitated delirium, myoclonus and seizures.¹⁻³

Case

A 70-year-old female with a history of peripheral T-cell lymphoma and chronic kidney disease, who was receiving hospice care at home, was prescribed extended- and immediate-release morphine for her severe cancer-related pain. Several days after her morphine doses were increased, her nurse received a call from the patient's husband, who noted that the patient appeared uncomfortable and was having hallucinations. Haloperidol and lorazepam were ordered, but she became clinically worse. The family reported "full body jerking and stiffness." Over several days, the patient's medications were adjusted multiple times. Her extended-release morphine and haloperidol were increased, lorazepam was scheduled and

chlorpromazine added. The patient's agitation and distress continued to escalate, and her family was distraught over her tremendous suffering. Eventually, after careful history and chart review, OIN was suspected, and her morphine was replaced with hydromorphone. This empiric treatment was chosen because rotation to a structurally dissimilar opioid has been shown to reduce myoclonus and other neuroexcitatory effects in patients with similar presentations.^{1,2,4-6} OIN was most likely the cause in this case as the patient exhibited the symptoms typically seen with the syndrome with the exception of seizures. Eight hours after switching medications, the patient was calm. Her family reported that she remained peaceful until she died.

Discussion

OIN is a rare but well-recognized condition. Its mechanism is poorly understood but is hypothesized to be the result of the toxic accumulation of morphine-3-glucuronide (M3G) in patients on chronic morphine therapy.^{7,8} However, OIN can occur with other opioids, as well. Although it can affect any patient on chronic opioid therapy, those with

renal failure, dehydration and electrolyte abnormalities are at greatest risk.^{9,10} OIN can be mistaken for increasing restlessness resulting from uncontrolled pain, delirium or extrapyramidal phenomena.⁹ Therefore, a complete history, physical exam and chart review are necessary to confirm it or rule it out.^{1,9} Early identification is important for developing effective strategies to treat myoclonus and reduce the offending opioid. **MM**

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REFERENCES

1. Matzo M, Dawson K. Opioid-induced neurotoxicity. *Am J Nurs*. 2013;113(10):51-6.
2. Mercadante S. Pathophysiology and treatment of opioid-related myoclonus in cancer patients. *Pain*. 1998;74(1):5-9.
3. Sacks T, Weissman DE, Arnold R. Fast Facts and Concepts 215: Opioid Poorly-Responsive Cancer Pain. Available at: www.mypcnw.org/#!/blank/1go9. Accessed April 26, 2016.
4. de Stoutz ND, Bruera E, Suarez-Almazor M. Opioid rotation for toxicity reduction in terminal cancer patients. *J Pain Symptom Manage*. 1995;10(5):378-84.
5. Wilson RK, Weissman DE. Fast Facts and Concepts 58: Neuroexcitatory Effects of Opioids: Treatment. Available at: www.mypcnw.org/#!/blank/ri83p. Accessed April 26, 2016.
6. Abrahm JL. *A Physician's Guide to Pain and Symptom Management in Cancer Patients*. 3rd Ed. Johns Hopkins University Press, Baltimore, 2014.

7. Teuteberg WG. Fast Facts and Concepts 142: Opioid-Induced Hyperalgesia. Available at: www.mypcnow.org/#!/blank/h5muh. Accessed April 26, 2016.

8. Smith MT. Neuroexcitatory effects of morphine and hydromorphone: evidence implicating the 3-gluc-

uronide metabolites. *Clin Exp Pharmacol Physiol*. 2000;27(7):524-8.

9. Broadbent A, Glare P. Neurotoxicity from chronic opioid therapy after successful palliative treatment for painful bone metastases. *J Pain Symptom Manage*. 2005;29(5):520-4.

10. Wilson RK, Weissman DE. Fast Facts and Concepts 57: Neuroexcitatory Effects of Opioids: Patient Assessment. Available at: www.mypcnow.org/#!/blank/wzt8f. Accessed April 26, 2016.

A Case of Papillary Aortic Fibroelastoma: When Bad Things Come in Small Packages

BY MOHAMMAD-ALI JAZAYERI, MD, DAVID MELLING, MD, DOMENICO CALCATERRA, MD, PHD, AND GAUTAM R. SHROFF, MBBS

PPrimary cardiac tumors have an estimated prevalence of 0.02% in the general population.¹ Papillary fibroelastoma (PFE) is a rare, benign cardiac neoplasm and the second most common type of primary cardiac tumor after myxoma. It most often involves the mitral and aortic valves and can be clinically silent or cause complications such as stroke and myocardial infarction.²

Case

A 48-year-old female with a history of tobacco use, hypertension and diabetes presented with left-leg weakness. Upon arrival in the emergency department, she had a score of 4 on the NIH stroke scale. Tissue plasminogen activator was not administered as it was unclear when her symptoms first started. (She was asymptomatic the previous night.) Brain MRI demonstrated infarction involving multiple vascular distributions suggestive of an embolic etiology (Figure 1). Cross-sectional imaging of the carotid vessels and the aortic arch was unremarkable. A transthoracic echocardiogram (TTE) with bubble study did not reveal an embolic source, and transesophageal echocardiogram (TEE) was unable to be performed safely because of poor dentition. The patient improved and was transferred from the ward to the rehabilitation unit where she developed new neurologic deficits. A repeat brain MRI confirmed new areas of infarction. TEE was ultimately performed following appropriate tooth extraction. It showed a mobile, pedunculated mass on the systemic aspect of the aortic valve

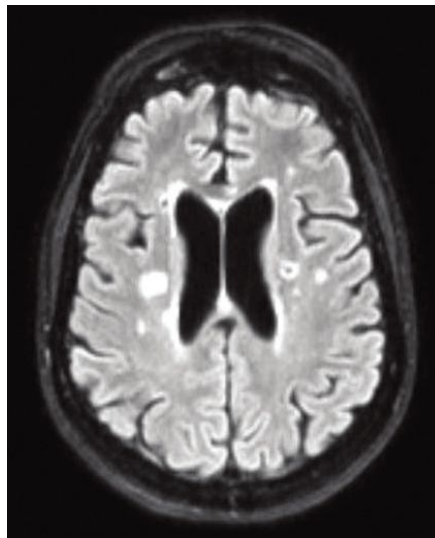


Figure 1. Brain MRI showing multiple areas of infarct suggestive of embolic stroke.

measuring 0.7 x 0.6 cm with characteristics suggestive of PFE (Figure 2). The patient underwent excision of the aortic valve mass while on cardiopulmonary bypass;

the final pathology was consistent with PFE (Figure 3). Her course was notable for significant neurologic deficits affecting her speech, swallowing, cognition and movement. She was free of new neurologic deficits at six-month follow-up and continues to improve with respect to known deficits.

Discussion

Echocardiography is part of the standard evaluation of patients with stroke. TTE is generally performed as the initial test because it is noninvasive. Previous studies have suggested that there is limited additional benefit to performing TEE in patients in normal sinus rhythm with a normal TTE.³ Current AHA/ASA guidelines for ischemic stroke do not make recommendations in this regard.⁴

Our patient presented with ischemic stroke and an infarct pattern highly suggestive of embolic mechanism. She was

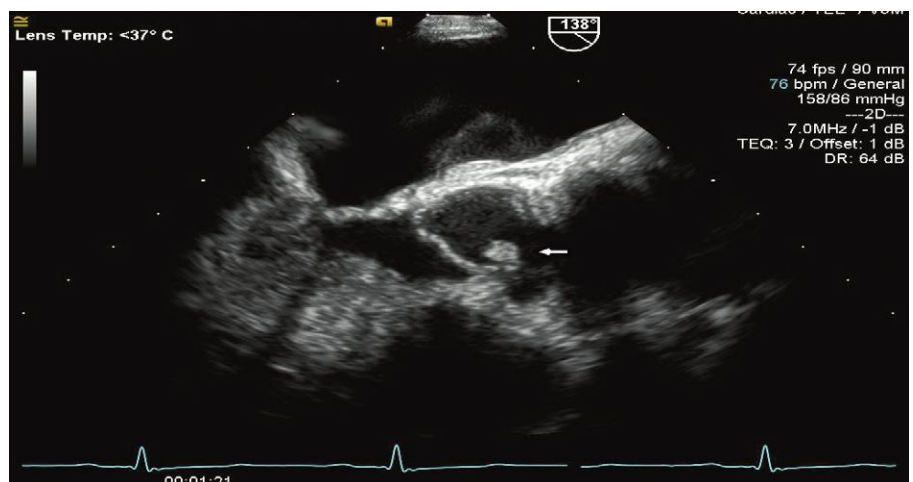


Figure 2. Transesophageal echocardiogram showing 0.7 x 0.6 cm aortic papillary fibroelastoma on the systemic aspect of the aortic valve (arrow).

found to have a small PFE. This neoplasm is said to resemble a sea anemone because of its frond-like papillary tissue.^{1,2} It is unclear whether emboli are the result of the fragile papillary fronds themselves or thrombi that form on the surface of the tumor. Symptomatic PFEs are treated with surgical excision. No consensus exists regarding management of asymptomatic PFEs. In general, surgical resection is recommended for asymptomatic PFEs located on the left side of the heart because of the potential for systemic embolization.^{1,2} Asymptomatic PFEs on the right side of the heart can be monitored with serial echocardiography. Regrowth after tumor resection has not been reported.¹ This case features a rare cause of embolic stroke and highlights the value of further investigation with transesophageal echocardiogram in cases where there is high suspicion for embolism despite negative TTE.⁵⁻⁷ **MM**

Mohammad-Ali Jazayeri and David Melling are resident physicians in the department of medicine at Hennepin County Medical Center. Domenico Calcaterra is chief of cardiothoracic surgery and Gautam Shroff is a staff cardiologist and director of the echocardiography laboratory at Hennepin County Medical Center.

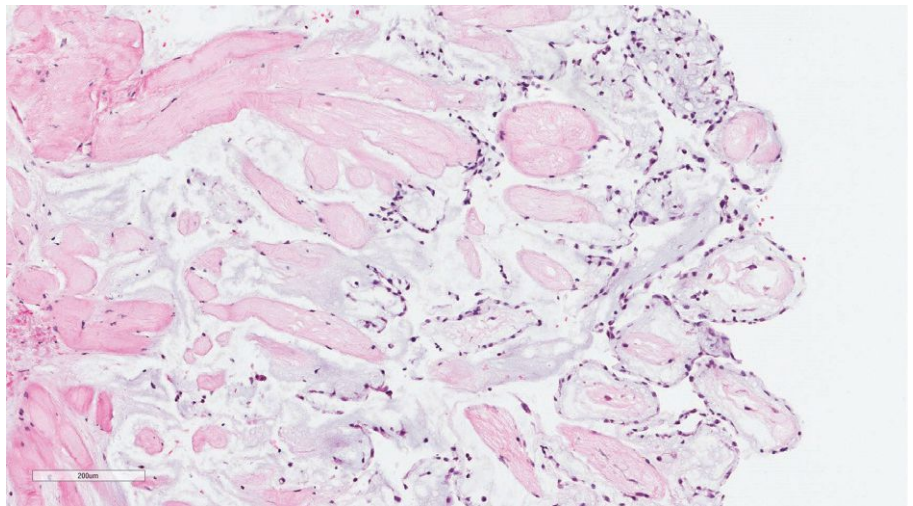


Figure 3. Histological examination of the aortic papillary fibroelastoma demonstrating a characteristic fibroelastic stromal core covered by endothelial cells.

REFERENCES

1. Gowda RM, Khan IA, Nair CK, Mehta NJ, Vasavada BC, Sacchi TJ. Cardiac papillary fibroelastoma: a comprehensive analysis of 725 cases. *Am Heart J*. 2003;146(3):404-10.
2. Sun JP, Asher CR, Yang XS, et al. Clinical and echocardiographic characteristics of papillary fibroelastomas: a retrospective and prospective study in 162 patients. *Circulation*. 2001;103(22):2687-93.
3. Leung DY, Black IW, Cranney GB, et al. Selection of patients for transesophageal echocardiography after stroke and systemic embolic events. Role of transthoracic echocardiography. *Stroke*. 1995;26(10):1820-4.
4. Jauch EC, Saver JL, Adams HP Jr, et al. Guidelines for the early management of patients with acute ischemic stroke: a guideline for healthcare professionals from the American Heart Association/American
5. Cho HJ, Choi HY, Kim YD, et al. Transesophageal echocardiography in patients with acute stroke with sinus rhythm and no cardiac disease history. *J Neurol Neurosurg Psychiatry*. 2010;81(4):412-5.
6. Morris JG, Duffis EJ, Fisher M. Cardiac workup of ischemic stroke: can we improve our diagnostic yield? *Stroke*. 2009;40(8):2893-8.
7. de Bruijn SF, Agema WR, Lammers GJ, et al. Transesophageal echocardiography is superior to transthoracic echocardiography in management of patients of any age with transient ischemic attack or stroke. *Stroke*. 2006;37(10):2531-4.

Vohwinkel Syndrome: A Rare Cause of Toe Pain in an Adolescent Male

BY ERIN M. DODD, KENNETH W. DODD, MD, BRUCE BART, MD, AND DOUGLAS BRUNETTE, MD

Case

A 17-year-old male presented to the emergency department following three weeks of progressive pain and swelling in his right fifth toe. He reported clear drainage from the area that was not foul-smelling. He had experienced similar episodes of pain in the same digit since childhood. There was no history of trauma, fever, chills or other systemic symptoms.

On physical examination, the patient appeared well and had normal vital signs. He had bulbous enlargement of the right fifth toe with band-like constriction near

the proximal interphalangeal joint (Figure 1). Clear drainage could be expressed from this area, and the entire length of the digit was tender to palpation. The left fifth toe was similar in appearance but was not tender. Range of motion was decreased in the fifth toes bilaterally. Diffuse, waxy, yellow hyperkeratosis was noted on the patient's hands and feet (Figure 1). The remainder of the examination was unremarkable.

Radiography of the right foot revealed a chronic deformity of the proximal phalanx of the fifth toe and a transverse linear defect through the mid-diaphysis, consistent

with fracture. There was no radiographic evidence of osteomyelitis (Figure 2).

The right fifth toe was immobilized and the patient discharged from the emergency department. He was referred to podiatry and dermatology for further consultation and possible surgical intervention. Further evaluation by dermatology revealed that the patient had Vohwinkel syndrome, a rare form of mutilating palmo-plantar keratoderma (PPK).

Discussion

PPKs are a heterogeneous group of inherited and acquired disorders characterized by abnormal thickening of the palms and soles. Vohwinkel syndrome, also known as keratoderma hereditaria mutilans (KHM), is a rare PPK that was first described in 1929.¹ It is an autosomal-dominant con-



Figure 1. Top: Bulbous enlargement of the right fifth toe with band-like constriction. Bottom: Diffuse waxy, yellow hyperkeratosis on the dorsal hands.



Figure 2: Deformity and fracture of proximal phalanx of the right fifth toe.

dition caused by a mutation in the *GJB2* gene, which encodes the gap junction protein connexin-26. KHM typically presents in infancy and evolves to include a triad of clinical features: honeycomb-like thickening of the palms and soles, starfish-shaped hyperkeratotic plaques and fibrous constriction bands at the interphalangeal joints. Constriction bands cause progressive strangulation that often results in digital autoamputation (pseudoinhum).² A variety of associated features have been described, including hearing loss, alopecia, spastic paraplegia/myopathy, mental retardation and craniofacial anomalies.^{3,4}

Treatment is primarily symptomatic in order to ameliorate the keratoderma and prevent autoamputation. Emollients, topical keratolytics and systemic retinoids are mainstays of treatment and have been used with varying success. However, systemic retinoids are associated with serious side effects, and relapse is common after discontinuation.⁵⁻⁷ Surgical release of constriction bands and excision with full-thickness skin grafting has been attempted with limited success. Although surgery can prevent autoamputation temporarily, long-term outcomes are poor as constriction bands typically recur.^{8,9} Digital fractures may signal impending autoamputation and should be managed with immobilization, pain control and appropriate interdisciplinary care.

This case depicts a classic presentation of KHM, a rare form of PPK. Physicians should be aware of the existence and clinical spectrum of PPKs, especially mutilating varieties that can lead to significant pain and disability. Patients with known or suspected KHM should be referred to appropriate specialists for further evaluation and management. **MM**

Erin Dodd is a medical student at the University of Minnesota. Kenneth Dodd is with Hennepin County Medical Center's departments of emergency medicine, internal medicine and critical care medicine. Bruce Bart is with the departments of dermatology at Hennepin County Medical Center and University of Minnesota. Douglas Brunette is with the departments of emergency medicine at Hennepin County Medical Center and the University of Minnesota.

REFERENCES

1. Vohwinkel KH. Keratoderma hereditarium mutilans. *Arch Dermatol Syph*. 1929;158:354-64.
2. Krol AK, Siegel D. Keratodermas. In: Bologna JL, Jorizzo JL, Schaffer JV, eds. *Dermatology*. 3rd ed. Philadelphia, PA: Elsevier Saunders; 2012.
3. Solis RR, Diven DG, Trizna Z. Vohwinkel's syndrome in three generations. *J Am Acad Dermatol*. 2001;44(2 Suppl):376-8.
4. Sensi A, Bettoli V, Zampino MR, Gandini E, Calzolari E. Vohwinkel syndrome (mutilating keratoderma) associated with craniofacial anomalies. *Am J Med Genet*. 1994;50(2):201-3.
5. Chang Sing Pang AF, Oranje AP, Vuzevki VD, Stolz E. Successful treatment of keratoderma hereditaria mutilans with an aromatic retinoid. *Arch Dermatol*. 1981;117(4):225-8.
6. Goldfarb MT, Woo TY, Rasmussen JE. Keratoderma hereditaria mutilans (Vohwinkel's syndrome): a trial of isotretinoin. *Pediatr Dermatol*. 1985;2(3):216-8.
7. Camisa C, Rossana C. Variant of keratoderma hereditaria mutilans (Vohwinkel's syndrome). Treatment with orally administered isotretinoin. *Arch Dermatol*. 1984;120(10):1323-8.
8. Atabay K, Yavuzer R, Latifoglu O, Ozmen S. Keratoderma hereditarium mutilans (Vohwinkel syndrome): An unsolved surgical mystery. *Plast Reconstr Surg*. 2001;108(5):1276-80.
9. Liebman JJ, Liu Y. Successful surgical management of keratoderma hereditaria mutilans. *Hand (NY)*. 2013;8(1):102-4.

“Shampoo” Distribution of Allergic Contact Dermatitis

BY KATHERINE GREY, SOLVEIG HAGEN AND ERIN WARSHAW, MD, MS

Case 1

A 63-year-old male presented with a three-month history of pruritic, eczematous dermatitis involving his face, scalp, neck, chest and arms (Figure 1a) that was minimally responsive to topical corticosteroids. Because of suspicion for allergic contact dermatitis (ACD), he was patch-tested using the North American Contact Dermatitis Group (NACDG) standard, auxiliary and corticosteroid series. Relevant positive reactions from the final reading are shown in the Table. The patient’s strong reaction to methylchloro-isothiazolinone/methylisothiazolinone (MCI/MI) was found to be clinically relevant as this preservative was in his shampoo (Figure 1b).

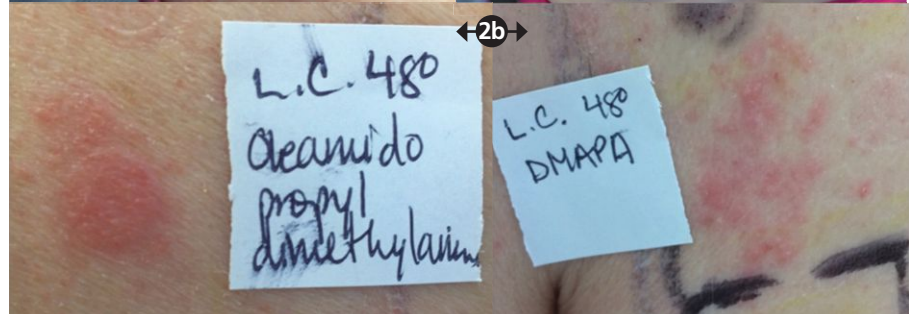


Figure Legend
 1a. Pink, eczematous plaques involving the patient’s scalp, hairline, neck, chest and upper arms.
 1b. Patch-test results at 72 hours depicting a strong (2+) reaction to MCI/MI.
 2a. Pink, eczematous plaques involving the patient’s neck, posterior auricular area and mid-back.
 2b. Patch-test results at 48 hours depicting strong (2+) reactions to dimethylaminopropylamine (DMAPA) and oleamidopropyl dimethylamine.



Case 2

A 64-year-old female presented with a 1.5-year history of pruritic dermatitis involving her hairline, scalp, neck and back (Figure 2a). The eruption began after she had her hair professionally dyed; it flared after she shampooed her cat. She did not respond to topical corticosteroids or ketoconazole shampoo. Because of suspicion for ACD, the patient was patch-tested using the NACDG standard, corticosteroid, cosmetic, preservative, vehicle, nail acrylate and hairdresser series. She also was tested to her personal products. Relevant positive reactions are shown in the Table. Of note, the patient had clinically relevant reactions to four surfactants (Figure 2b).



Discussion

Allergic contact dermatitis is a cutaneous delayed-type hypersensitivity reaction. Reactions to shampoo allergens present in a characteristic distribution. Clues to this

TABLE

Relevant positive patch test results

Allergen	Case 1 (day 7)	Case 2 (day 5)
Preservative		
Methylchloroisothiazolinone/methylisothiazolinone	++	
Surfactants		
Dimethylaminopropylamine		++
Oleamidopropyl dimethylamine		++
Amidoamine		+
Decyl glucoside		?
Fragrance		
Fragrance Mix I		?
Balsam of Peru		?
Personal products		
Ketoconazole shampoo		?
Aubrey Organics shampoo		?
Desert Essence shampoo		?
Free and Clear shampoo		?

? = doubtful (macular erythema)

+ = weak (erythema and infiltration, possible papules)

++ = strong (edematous or vesicular)

diagnosis include pruritic, eczematous skin eruption involving the face, hairline, and/or neck. Dermatitis may localize over the lumbar area on the back because of pooling of shampoo in this location. Dermatitis of the hands is not uncommon, especially among hairdressers and caregivers.^{1,2}

Shampoo allergy can go undetected as patients often change shampoos without identifying the causative ingredient. Referral to dermatology should be considered for all patients with suspected ACD to shampoo. Relevant allergens include surfactants, preservatives and fragrance chemicals.³ Surfactants are added to shampoos, cleansers and detergents for their lathering and cleansing properties. The NACDG standard series includes six surfactants. Cocamidopropyl betaine, amidoamine, dimethylaminopropylamine

and oleamidopropyl dimethylamine are structurally related and have a high rate of co-reactivity. Cocamide DEA and decyl glucoside are not structurally related and, therefore, are less likely to co-react with the aforementioned surfactants.⁴

Preservatives are added to shampoos for their antimicrobial properties. The number of cases of allergic contact dermatitis involving MCI/MI, a preservative found in up to 50% of shampoos,³ has doubled over the past decade, resulting in strict regulations in Europe.⁵ Although cases of ACD involving formaldehyde-releasing agents are declining because they are being replaced by other preservatives in products,⁵ this class of preservatives is still frequently found in shampoos.³ Common formaldehyde-releasing preservatives include DMDM hydantoin, diazolidinylurea, quaternium-15 and imidazolidinylurea.

Fragrance is the most common ingredient added to shampoo products.³ Even products labeled “fragrance-free” may contain fragrance, often in the form of botanical ingredients. Several fragrances

are tested on the NACDG standard series and are among the most prevalent positive allergens.⁵

These cases highlight the importance of recognizing the characteristic distribution of shampoo allergy. Practicing physicians may initially consider treatment with topical corticosteroids. If the patient does not improve, consider referring for skin-patch testing to determine which ingredients may be causing the reaction. **MM**

Katherine Grey and Solveig Hagen are students at the University of Minnesota Medical School. Erin Warshaw is with Hennepin County Medical Center's Parkside Occupational and Contact Dermatitis Clinic, Minneapolis VA Medical Center and the University of Minnesota department of dermatology.

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REFERENCES

1. van der Walle H. Dermatitis in hairdressers (II). Management and prevention. *Contact Dermatitis*. 1994;30:265-70.
2. Korting HC, Parsch EM, Enders F, Przybilla B. Allergic contact dermatitis to cocamidopropyl betaine in shampoo. *J Am Acad Dermatol*. 1992;27(6 Pt 1):1013-5.
3. Zirwas M, Moenich J. Shampoos. *Dermatitis*. 2009;20(2P):106-10.
4. Fowler JF, Shaughnessy CN, Belsito DV, et al. Cutaneous delayed-type hypersensitivity to surfactants. *Dermatitis*. 2015;26(6):268-70.
5. Warshaw EM, Maibach HI, Taylor JS, et al. North American contact dermatitis group patch test results: 2011-2012. *Dermatitis*. 2015;26(1): 49-59.

Inpatient Management of Croup: A Preliminary Report

BY ANNA SOFI ASMUNDSSON, MD, JOSEPH ARMS, MD, CARLY THIELER, MD, RAHUL KAILA, MD, DAN NERHEIM AND JEFF LOUIE, MD

Croup is a common reason for pediatric emergency department (ED) visits. Traditional practice has been to admit patients needing more than one dose of nebulized racemic epinephrine (RE). Few studies have documented inpatient management and the natural course of children admitted for croup. However, there is evidence that discharging patients home from the ED is safe if stridor has resolved after multiple RE treatments.

Objective

Our aim was to describe inpatient management of children admitted from the ED with a diagnosis of croup.

Methods

This was a multi-center, retrospective case series involving three pediatric hospitals in Minneapolis and St. Paul. We included children ages 6 months to 5 years who were diagnosed with croup, evaluated in the ED and treated with at least one racemic nebulization prior to admission to the hospital. We excluded children who were discharged home from the ED as well as those with congenital anomalies or previous surgeries of the airway.

Results

Of 682 patients admitted with croup as inpatients, 439 (64.4%) were male. Their mean age was 17.3 ± 7 months. After admission, the majority, 516 (75.7%),

did not receive further respiratory treatments (RE or heliox) and did not require admission to the PICU. Of the patients who did need further intervention, most received only one RE treatment after admission. Sixty-seven (9.8%) received two or more RE or heliox treatments. None of the patients required intubation, and there were no reported deaths. Male gender was found to be statistically significant for requiring more inpatient interventions, while history of intubation or initial vitals in the ED were not significantly different among patients who did and did not require further inpatient treatments. Patients who received respiratory treatments after inpatient admission had more imaging performed in the ED, and their average length of hospital stay was longer than that of patients who did not need additional treatments. The mean age of patients admitted without further intervention was 17.2 ± 7 months while the mean age of those who did need additional treatments and/or admission to the PICU was 17.6 ± 7 months. Of those patients who were managed in the PICU, 18 were directly admitted from the ED, while three were initially treated as inpatients.

Conclusion

Our study showed that 75% of patients who were admitted as inpatients for croup did not require any significant interventions (defined as any number of RE or heliox treatments) or need to be transferred to a higher level of care. Less than 10% needed more than one additional RE treatment. Despite the frequency of croup seen in pediatric practice, the American Academy of Pediatrics has no official guideline for treatment and indication for hospitalization. UptoDate recommends admitting children who have a recurrence of symptoms after having received one RE treatment in the ED; this

is reflected in many clinicians' practices.

Our findings suggest that a majority of children who remain asymptomatic after one or several RE treatments likely do not require inpatient admission. The effect of RE typically lasts up to two hours, and a longer observation time in the ED (three to four hours after the last treatment) would likely be adequate to ensure safe discharge home, with instructions to return if stridor recurs. Reducing inpatient admissions could decrease costs to families and make more beds available for other patients, especially during the high-volume winter months. However, given that we found no significant differences between patients who did and did not require inpatient interventions, prospective studies may be needed to adequately identify individuals likely to require more inpatient treatments. **MM**

Anna Sofi Asmundsson is a pediatrics resident at the University of Minnesota. Joseph Arms is a pediatric emergency medicine physician and Carly Thieler is a pediatric emergency medicine fellow at Children's Hospitals and Clinics of Minnesota. Rahul Kaila and Jeff Louie are pediatric emergency medicine physicians at the University of Minnesota. Dan Nerheim is with the University of Minnesota's department of pediatrics.

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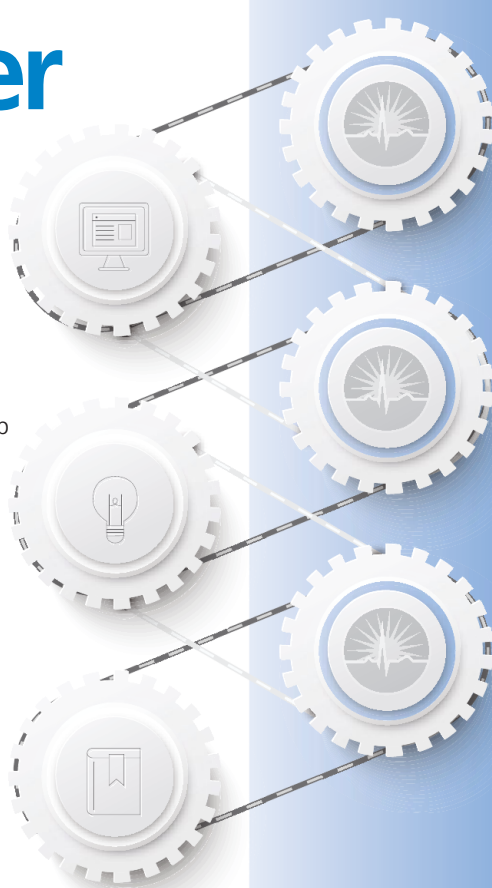
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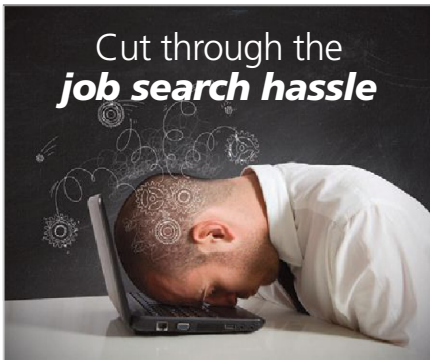
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Protest poem for a boy with leukemia

BY STAN MCCORMICK, MD

This boy, this dying boy
who cannot live within
his own beloved blood
will come back

Leading armies of willow leaves
to smash the House of God, spear the heads
of presidents and popes, burn down
the diffident, wooden hearts.

This dying boy will sweep away
with the sword of a violent heart
the undying cells soiled in the bones
of leukemic children.

This boy will breathe moonlight, bathe
in his father's hot tears, lie naked
in his mother's bed, remembering
her perfect dream.

He'll show everyone he, too,
had a man's back, squared shoulders,
and knew the smell of horses and grass hay.

This boy will forgive the world
its beautiful failings: leaf-strewn snow,
clutter of acorns in the street, and words
left unsaid—small, pointless things
that make everything else bright.

He'll say now he knows why his sister
loved an armless doll as much as him,
why his mother's hands always seemed so large
and why his father always wanted to die first.



2016 WRITING CONTEST

HONORABLE MENTION



Stan McCormick is with Hospital Pathology Associates. His focus is hematopathology.

ABOUT THIS POEM:

"This poem was inspired by the deaths of two children from cancer. One was a nursery school friend and classmate of my son; the second was a neighborhood friend who attended second grade with my daughter. Having observed these children while they endured multiple rounds of chemotherapy and radiation, I was humbled by their resolve to adapt and stay engaged in school activities. The experience taught me a great deal about the innate resilience of children, and the marvelous ways they rally around those who are sick and dying. Still, after each child died, I felt a kind of rage building up when I saw how weak our civic and religious institutions were in helping those who loved these children make sense of the tragedy. So, the poem ended up as part tribute to the valiant struggle of two children with cancer, and part protest against our inability to mitigate the heavy loss the world incurs with the death of a child."

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