THE JOURNAL OF THE MINNESOTA MEDICAL ASSOCIATION

WINNESOTE DICINE

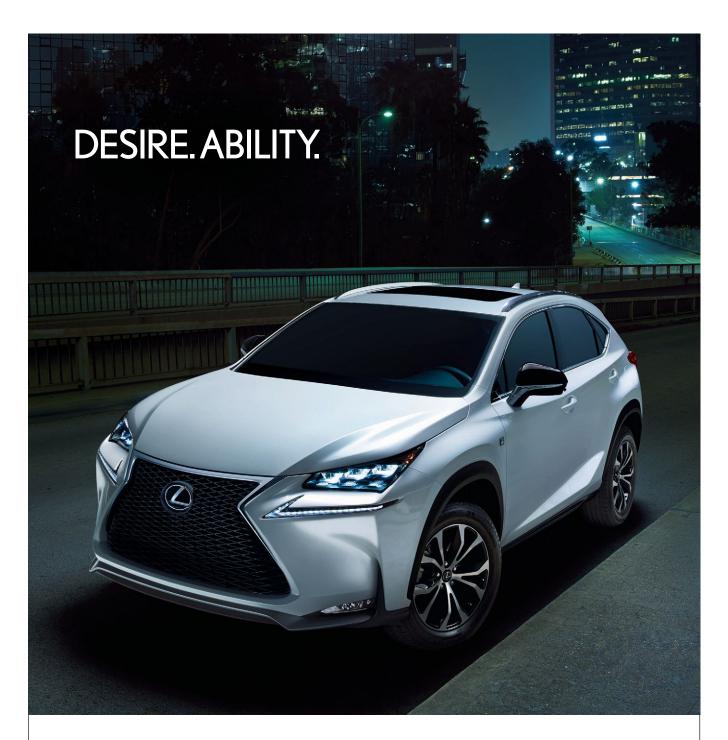
JANUARY 2015

Association

HIDDEN COSTS

High-deductible health insurance policies are causing financial headaches for clinics and hospitals—and doctors say they're hurting patient health. **PAGE 22**







Need vs. want. Capable vs. captivating. Sensible vs. spine-tingling. Many luxury crossovers force you to choose utility over style. But when you combine a 2.0-liter turbocharged engine, spacious cargo area and an available Qi^1 wireless device-charging tray with a boldly sculpted body, there is no more versus. Introducing the first-ever NX Turbo, NX Turbo F SPORT and NX Hybrid. Once you go beyond utility, there's no going back.



 $lexus.com/NX \mid \#LexusNX$

LEXUS OF WAYZATA

16100 Wayzata Blvd., Wayzata (866) 804-7362

LEXUS OF MAPLEWOOD

3000 North Highway 61, Maplewood (888) 419-8462

Options shown. 1. Qi wireless charging may not be compatible with all mobile phones, MP3/WMA players and like models. ©2014 Lexus.



minnesota College Savings Plan

You can get there. We can help.

CONTENTS

January 2015 | VOLUME 98 | ISSUE 1

FEATURES

ON THE COVER

22 Hidden costs

High-deductible health insurance policies are causing financial headaches for clinics and hospitals—and doctors say they're hurting patient health.

BY HOWARD BELL

FEATURES

14 Package deal

Practices are turning to bundled pricing for certain procedures.

BY SUZY FRISCH

16 Single-payer health care

More physicians are considering it, but is it a realistic option? BY KIM KISER

Clinical AND Health Affairs

38 How Should Doctors Disclose Conflicts of Interest to Patients? A Focus Group Investigation

BY J. MICHAEL OAKES, PHD, HILARY K. WHITMAN, MPH, ALICEN BURNS SPAULDING, PHD, LYNN A. ZENTNER, JD, AND SETH R.

- **42** Why MNsure Matters to Physicians BY JANET SILVERSMITH
- **45** Turning the Tide against AIDS by Preventing New HIV Infections: Initial Experience with Minnesota's First PrEP Clinic

BY CAITLIN ECCLES-RADTKE, MD, AND KEITH HENRY, MD





DEPARTMENTS

4 EDITOR'S NOTE

6 LETTERS

8 SHORT TAKES

The numbers: Money and other matters

Downtime: Home brewer

What's new: Blue Cross opens store

Conversations: Is the ACA achieving its goals

in Minnesota?

28 THE PHYSICIAN ADVOCATE

A 2015 Legislative forecast, news briefs, Board Chair Doug Wood on why physicians need to lead on the issue of cost

48 EMPLOYMENT OPPORTUNITIES

RETROSPECTIVE

32 A History of Innovation: **Cardiac Surgery in Minnesota**

BY JOHNATHON M. AHO, MD, MATTHEW S. SCHAFF, MD, CORNELIUS A. THIELS, DO, MBA, ROBERT A. DARLING, MD, MARK N. PRICE KOERNER AND HARTZELL V. SCHAFF, MD

COMMENTARY

36 Supportive living, sustainable care

We need to rethink our approach to caring for people with severe mental illnesses if we are all to thrive.

BY KEVIN TURNQUIST, MD

END NOTE

52 Spinal muscular atrophy A POEM BY ARIELA TAUB, MD Minnesota Medicine is intended to serve as a credible forum for presenting information and ideas affecting Minnesota physicians and their practices. The content of articles and the opinions expressed in Minnesota Medicine do not represent the official policy of the Minnesota Medical Association unless this is specified. The publication of an advertisement does not imply MMA endorsement or sponsorship.



To submit an article

The editors reserve the right to reject editorial, scientific, or

advertising material submitted

Medicine. The views expressed

in this journal do not necessarily

represent those of the Minnesota Medical Association, its editors,

for publication in Minnesota

or any of its constituents.

Contact Carmen Peota at

cpeota@mnmed.org.

MEDICINE

Minnesota Medicine 1300 Godward Street, Suite 2500 Minneapolis, MN 55413

PHONE: 612-378-1875 or 800-DIAL-MMA

ЕМАІІ: mm@mnmed.org

WEB AND DIGITAL EDITION: minnesotamedicine.com

OWNER AND PUBLISHER

Minnesota Medical Association

EDITOR IN CHIEF

Charles R. Meyer, MD

FDITORS

Carmen Peota Kim Kiser

PHYSICIAN ADVOCATE WRITER

ART DIRECTOR

Kathryn Forss

MMA COMMUNICATIONS DIRECTOR

Terry Ruane

CIRCULATION/WEB CONTENT

Mary Canada

ADVISORY COMMITTEE

Angie Buffington, PhD Dominic Decker Donald L. Deye, MD Mark Eggen, MD Barbara Elliott, PhD Jon S. Hallberg, MD Neal Holtan, MD Peter J. Kernahan, MD Kevin Manzel, DO Zeke J. McKinney, MD, MHI Robert K. Meiches, MD Gregory Plotnikoff, MD Martin Stillman, MD, JD Keith M. Swetz, MD, MA Ruth Westra, DO, MPH Barbara P. Yawn, MD

COPYRIGHT AND POST OFFICE ENTRY

Minnesota Medicine (ISSN 0026-556X [print] and 1945-3051 [online]) is published 11 times a year by the Minnesota Medical Association, 1300 Godward Street NE, Suite 2500, Minneapolis, MN 55413. Copyright 2015. Permission to reproduce editorial material in this magazine must be obtained from *Minnesota Medicine*. Periodicals postage paid at Minneapolis, Minnesota, and at additional mailing offices. POSTMASTER, send address changes to *Minnesota Medicine*, 1300 Godward Street, Ste 2500, Minneapolis, MN 55413.

SUBSCRIPTIONS

Annual subscription: \$45 (U.S.) and \$80 (all international)

MISSING ISSUES AND BACK ISSUES

Missing issues will be replaced for paid subscribers at no additional charge if notification is received within six months of the publication date. Replacement of any issues more than six months old will be charged the appropriate single back issue price. Single back issues of *Minnesota Medicine* can be purchased for \$25 (U.S.) and \$30 (Canada, Mexico, and other international). Send a copy of your mailing label and orders to Mary Canada, 1300 Godward Street, Ste 2500, Minneapolis, MN 55413 or fax it to 612-378-3875.

TO ADVERTISE

Contact Scott Wilson PHONE: 612-362-3748

EMAIL: swilson@mnmed.org



MINNESOTA MEDICAL Association

PRESIDENT

Donald Jacobs, MD

PRESIDENT-ELECT

Dave Thorson, MD

PAST PRESIDENT Cindy Firkins Smith, MD

Doug Wood, MD SECRETARY/TREASURER

SPEAKER OF THE HOUSE Robert Moravec, MD

CHAIR, BOARD OF TRUSTEES. CHIEF EXECUTIVE OFFICER Robert Meiches, MD

EDITOR'S NOTE



Charles R. Meyer, MD, Editor in Chief

The picture of the health care economy is as clear as a murky night on the English moors.

Like a ghost in the fog

n her recent novel The Accursed, Joyce Carol Oates describes filmy wraiths traveling across cornfields and children long-dead appearing at windows, then disappearing out of reach of viewing humans. In many ways, the finances of health care are similar—a slippery, untouchable, seemingly incomprehensible apparition that defies explanation or solution. Every time we seem to be conquering the spending puzzle, success vanishes into the fog.

For decades, we have thrown multiple weapons at this phantom—HMOs, PPOs, capitation, DRGs-only to have the money-gobbling specter smile coyly and continue on its spendthrift way. Vestiges of past fixes still live with us, but the percentage of GDP devoted to health care keeps climbing.

There are signs that things are changing. In 2013, U.S. health care spending grew at the lowest rate since tracking began in 1960; and for four consecutive years, health care spending grew at the same rate as the rest of the economy. In a recent article in the New York Times, Margot Sanger-Katz cited reasons for this hopeful trend including the slowing growth of the price of medical services, the decline in the volume of hospitalizations, and the decrease in spending by Medicare, private health insurance and consumers out of pocket. Other optimistic trends include fewer hospital readmissions and medical errors. Maybe we are doing something right.

The pessimists say the spending decline is just the Great Recession pulling health care down as it did the rest of the economy. In recession, we spend less on everything

including pills and doctor visits. Yet in the past 40 years, similar—though less dramatic—downturns in the economy did not stem the relentless expansion of health care spending. So, as usual, the picture of the health care economy is as clear as a murky night on the English moors.

Meanwhile, we press onward with new and old efforts to contain costs. High-deductible health plans that are supposed to give patients more skin in the game are all the rage. The idea is to cultivate a cadre of smart-shopping consumers who will look for the best deal in town and drive prices down as competition heats up. Yet faced with direct payment of medical bills, patients may avoid rather than compare care, resulting in disturbing stories of medical tragedies. Capitation has returned in the guise of ACOs or in miniature form with bundled payments for defined medical events such as joint replacements. Fixed prices for a basket of medical care challenge medical providers to be frugal and efficient or lose money. Whether this solution redux will be more successful than its previous incarnations remains to be seen.

To the seasoned observer of the health care scene, the current attempts evoke an eerie sense of déjà vu. Will our current health care economics play out, as if in a Oates-ian tale, where the goblin evades our grasp? Or will we get things right and finally conquer the unconquerable? Do we have a ghost of a chance? MM

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



Is that necessary?

Sometimes conducting another test or treatment is not the answer.

That's what the Choosing Wisely® campaign is all about. Helping physicians and their patients avoid unnecessary care. Open patient communication. Improving patient outcomes.

Medical specialty societies across the country have identified more than 130 commonly used tests and procedures that physicians and their patients should question and discuss together.

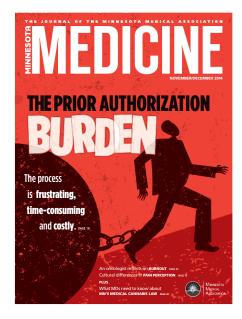
Be a part of the solution. Learn more about the tests and procedures, available resources for patients and how together you can choose wisely.

Visit www.choosingwisely.org.

And see how the MMA is helping the cause at **www.mnmed.org/ choosingwisely**.







Article too soft on insurers

Howard Bell's article on the burden of prior authorization (November/December, p. 18) was timely, but it is apparent that he has never been involved in the process. He starts out strong but then back-pedals fiercely in the section subtitled "Good intention in need of a fix." There are no good reasons for prior authorization. The simple fact is this is a road block set up by insurance companies. It's a hassle pure and simple.

David Walcher, MD Rurnsville

Prior authorization hits psychiatry hardest

I'm a vigorous critic of all managed care techniques, so when I saw the headline on the cover of last month's Minnesota Medicine, "The prior authorization burden: The process is frustrating, time-consuming and costly," I thought, no kidding. State and federal governments have granted managed care organizations (MCOs) and pharmaceutical benefit managers (PBMs) the power to deny prescriptions based on some vague idea that it saves money. Governments are still enamored with that idea despite overwhelming evidence that it merely redirects those dollars to the bottom line of the MCOs and PBMs. Those paying the price are patients and physicians.

As with most managed-care tactics, the burden of prior authorization has fallen disproportionately on psychiatric practices and patients with mental illness. Results of one of the first studies of the effects of prior authorization showed that when prescription limits were imposed on patients with severe chronic mental illness, the result was increased health care costs that exceeded the savings in medication by a factor of 17.1

A more recent study looked at a population of Ohio residents with schizophrenia and bipolar disorder.² Using conservative estimates of cost for such things as hospitalization, lost wages, homelessness and incarceration, researchers determined that treatment discontinuities caused by prior authorization cost the rest of us \$23 million while the PBMs and MCOs saved \$6 million.

Recently, we have begun to be concerned about the mass incarceration of people with mental illness. But nobody is paying attention to the fact that their health care bills are paid by the correctional system and not insurance. Often, these individuals' psychiatric care is severely disrupted because correctional systems have their own limited formularies. A patient may eventually get a medication, but not one that has been carefully assessed to work for him or her.

The research demonstrates that "savings" from prior authorization is savings to a health care company only. It does not benefit the patient, and it costs physicians considerably. Given these considerations, it is good to see the state medical society finally paying attention to prior authorization. That doesn't mean anything will be done, however, and the evidence for that was contained in the story. Janet Silversmith, policy director for the MMA, was quoted as saying: "We are not trying to eliminate drug prior authorization. We are just trying to add some sanity to the process. As it's practiced now, we believe drug prior authorization is an onerous,

inefficient process that sometimes harms patients."

Why wouldn't any medical society want to kill that kind of process?

George Dawson, MD, DFAPA Lino Lakes

REFERENCES

- 1. Soumerai SB, McLaughlin TJ, Ross-Degnan D, Casteris CS, Bollini P. Effects of a limit on Medicaid drug-reimbursement benefits on the use of psychotropic agents and acute mental health services by patients with schizophrenia. N Engl J Med. 1994;331(10):650.
- 2. Fleeter H. Estimate of the Net Cost of A Prior Authorization Requirement for Certain Mental Health Medications. Prepared by Driscoll and Fleeter for National Alliance on Mental Illness Ohio. August

Single payer would ease administrative burden

Frustrating. Time-consuming. Costly. Inefficient. Onerous. These words appear in your excellent cover story "The prior authorization burden." As a primary care physician, I find myself routinely exasperated as I attempt to comply with the hopelessly complex and illogical prior authorization requirements of private insurance plans. I also witness the unnecessary suffering my patients experience when at the whim of their payer they suddenly encounter new barriers to filling a prescription.

Your story highlights one payer for whom prior authorization is transparent, streamlined and rare. It's one we all know-Medical Assistance. This unified public plan pays for more than 99 percent of prescriptions without requiring a prior authorization request and through bulk purchasing is able to negotiate fair, affordable prices with drug com-

These are the very features that make a compelling case for replacing our multipayer patchwork of coverage with a unified, efficient, single-payer plan. Better for patients. Better for physicians.

Ann Settgast, MD St. Paul

SANFORD CANCER CENTER

Currently enrolling patients into KEYNOTE 055, a new clinical trial for refractory head and neck cancer.

Led by Sanford Health oncologist Steven Powell, MD and otolaryngologist John Lee, MD, KEYNOTE 055 is studying the investigational drug, pembrolizumab (MK-3475).

Eligible refractory head and neck cancer patients will receive pembrolizumab every three weeks, and may continue for up to 24 months. Referral consults are available over the phone.

CALL (877) 878-4825 TO LEARN MORE.

SANFORDHEALTH.ORG/CLINICALTRIALS





200-46350-1020 11/14

A Free Service for Healthcare Providers
Telephone Consults | Clinical Triage | Referrals & Resources



PAL is here to help healthcare providers gain immediate and free telephone or online access to PrairieCare Medical Group professionals and psychiatrists.

Call today for mental health triage and referral, or for a consultation with a Board Certified Child and Adolescent Psychiatrist regarding a patient.

mnpsychconsult.com 855.431.6468

Provided by PrairieCare through a grant from MN DHS.



SAVE THE DATE! 2015

DoubleTree Minneapolis South

7800 Normandale Blvd, Bloomington, MN 55439



Over 700 Attendees in 2014 Monday, April 20, 2015 Keynote

Dr. Diane Meier

Director of Center to Advance Palliative Care

Registration to open mid-January 2015 Continuing Education Credits will be provided 2- day conference fees member \$300/non-member











The University of Minnesota School of Nursing, Office of Practice, Partnerships, and Professional Development, is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the Joint providership of Allina Health and Minnesota Network of Hospice & Palliative Care. Allina Health is accredited by the ACCME to provide continuing medical education for physicians.

Visit www.mnhpc.org for more information

Money and other matters

Each year, Medscape issues a report on physician compensation and practice trends in the United States. The most recent report, which was released in November of 2014, is based on responses



Who makes the most?*

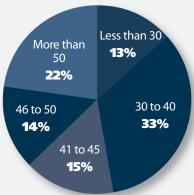
Orthopedics	\$413,000
Cardiology	\$351,000
Urology	\$348,000
Gastroenterology	\$348,000

Who makes the least?*

HIV/infectious disease.. \$174,000 Family medicine \$176,000 Pediatrics......\$181,000

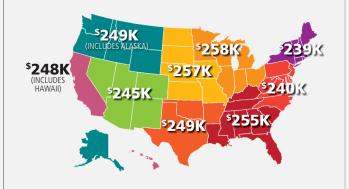


How many hours a week do you spend seeing patients?





Where do the highest earners live?





Whose salaries have changed?

Biggest gainer Rheumatology (up by 15%) Biggest loser Nephrology (down by 8%)

Who feels most fairly compensated?

Dermatologists

Least fairly compensated? Plastic surgeons

^{*}average salaries

from more than 25,000 physicians in 24 specialties. Participants were recruited between December 11, 2013, and January 24, 2014. Here are some of the findings:



Do you discuss the cost of treatment with patients?

Regularly

32%

If the patient brings it up

40%

Never

16%



How many hours a week do you spend on paperwork/administration?

	SELF-EMPLOYED	EMPLOYED
None	14%	13%
1 to 4	29%	24%
5 to 9	31%	28%
10 to 14	12%	12%
15 to 19	7%	9%
20 or more	7%	14%





Would you do it all over?

Would choose medicine as a career again

58%

Would choose the same specialty

47%

Would choose the same practice setting

26%

Source: Medscape Physician Compensation Report 2014

"The rumor is true," says Ian Gallaher, MD, when asked about the accolades he recently received. "I got third place in the IPA category at the Nordeast Big River Homebrew Competition."

Gallaher, who started making beer about a year and a half ago after his wife bought him a home-brewing kit, says he entered the competition to get an unbiased critique of his India pale ale, as "friends and family tend to offer positive feedback."

Sounding like the physician he is, Gallaher describes how he worked to ensure his winning brew, "IPA Compliant" (a take-off on HIPAA compliant), was indeed IPAcompliant by following the "IPA guidelines." And he describes brewing as both an art and a science that combines aspects of chemistry and microbiology.

Gallaher says he got interested in brewing by doing it with his father and friends. Now, he makes a batch every couple of months on the deck or porch of his south Minneapolis home. "It's a great hobby because you only need a little time every once in a while." He also likes the fact that his creative outlet yields something he can share. Last year, he made a porter that he flavored with oak cubes soaked in bourbon. He gave bottles of his creation to family and friends. "It's satisfying in many ways to produce a product, something that's tangible, that you can share and enjoy with others," he says.



University of Minnesota radiation oncology resident Ian Gallaher at home with his beer-brewing set-up.

Brewing is only one of the ways Gallaher takes a break from medicine. He also enjoys road biking and down-hill skiing. And he's recently tried his hand at veg-

etable gardening, which ties in nicely with his brewing. About half the hops used in his IPA were grown on a 20-foot vine in his backyard. - CARMEN PEOTA



Blue Cross opens store

Minnesotans can now shop for health insurance plans as they would for jackets or jewelry. Blue Cross and Blue Shield (BCBS) of Minnesota opened the state's first health insurance retail store November 8 in a strip mall in Edina. It's a space where shoppers can buy Blue Cross products and where members can speak with a customer service representative in person.

Although it may seem counterintuitive to be opening a bricks-and-mortar store at a time when retailers of many products are moving their business online, BCBS officials see it as a timely move. "With the introduction of the Affordable Care Act, we thought the time is now for us to be able to have a presence to help consumers navigate through complex and often-confusing [information]," says Monica Engel, vice president of consumer markets. She says BCBS of Minnesota has been learning from the experience of Blue Cross insurers in other states, which have been experimenting with the retail model for several years.

The Edina store, located near the Southdale shopping area, targets people in the individual market and those looking to

buy Medicare supplement products. To bring in customers, the store will host educational sessions on Medicare and other topics, and wellness events such as smoking-cessation sessions, exercise classes and flu shot clinics.

So what is the health insurance retail experience like? Think the Apple Store rather than Macy's. In the white and blue, wood and stainless steel reception area, you can research options on your own or schedule an appointment at a genius-bar-style reception desk. Sales offices are equipped with computers and iPads. The community room, where classes will be held, is more colorful and features mural by local artist Adam Turman.

Engel says the store is an attempt to meet the needs of the consumer who likes to look, touch and feel before they buy. "Not everyone wants to purchase online," she says. "Some people want to be able to sit across the table from someone face to face who understands what their purchase is about." —CARMEN PEOTA

Data on insurance savvy, satisfaction

In December, the Minnesota Department of Health released survey results showing, among other things, that only half of Minnesotans feel they have the necessary skills to navigate the health care/health insurance system. The estimates were based on responses of 499 Minnesotans who took part in the national Health Reform Monitoring Survey.

Respondents were asked whether they had the ability to do such tasks as find a provider in their network, determine if a service is covered by their plan and calculate the cost of a health care service or prescription. Only 54 percent felt confident they had all those skills.

They also were asked about their understanding of seven terms: premium, deductible, co-payment, co-insurance, maximum annual out-of-pocket spending, provider network and covered service. Sixtyone percent said they understood all of them.

Although they may doubt their own abilities with regard to navigating the insurance-care terrain, respondents seemed to be satisfied with their coverage. About 80 percent thought their health insurance policy provides them with an adequate range of services, choice of providers and protection against medical bills. Fewer, however, were satisfied with the amount they're paying for premiums (58 percent), co-payments (59 percent) and deductibles (66 percent). And only half were satisfied with the quality of care available.

More information about the Health Reform Monitoring Survey is available at www.health.state.mn.us/ healtheconomics.

Minnesota AND the ACA

Is the law achieving its goals in our state?

iven the ongoing news reports about the many facets of the Affordable Care Act in recent years, it's been easy to forget that the massive law had three main goals: to expand access to health insurance, protect patients against arbitrary actions by insurance companies and reduce costs. A year into its full implementation, it seemed a good time to examine whether it's gaining on those goals in Minnesota.

For perspective, we talked with Julie Sonier, MPA, deputy director of the State Health Access Data Assistance Center (SHADAC). Sonier studies and reports on health care access, insurance coverage and health care costs.

In June, SHADAC reported that 180,000 formerly uninsured Minnesotans gained insurance coverage last year. How did that number strike you?

It's large. The number without insurance fell by 40 percent in a period of eight months. That's not something that's ever happened before in Minnesota. We saw it as a very significant finding.

What kind of insurance policies did those individuals get?

Most of the gain in coverage was in the state programs. That wasn't particularly surprising, given that we knew from prior research that a sizable number without insurance coverage were likely eligible for public coverage but not enrolled for some reason.



Julie Sonier, deputy director, State Health Access Data Assistance Center

How far along is Minnesota toward the goal of covering all people?

We estimated that there are about 264,000 who are still uninsured. What we weren't able to look at with the methods and the data we had for our study was who those people are. Do they have higher or lower incomes? What types of coverage would we expect those people to qualify for if they were to sign up for coverage? We will begin to know some of those details as additional data collection is done.

Is the ACA making gains on the goal of protecting against certain insurance company actions?

Minnesota has had laws since the 1990s that do a lot of things that the ACA did—for example, not allowing health insurance companies to charge different premiums by gender, guaranteeing renewal of policies in the nongroup market. What we didn't have was a guarantee that someone who wanted to buy coverage in the nongroup market would be able to do so. Instead, the state had a high-risk pool, which is being phased out. So there is now a guarantee that people will be able to buy a regular nongroup policy if they want to. There's also no longer any premium variation based on health status. I think the bottom line is that many of the rules to protect against the most egregious things were already in place in Minnesota.

How about the goal of reducing costs?

I think this will take longer to unfold. There are two ways to look at it: What's the impact on insurance premiums and what's the impact on health care costs? We've seen some volatility in the price of premiums and don't know how competitive the market is going to be. I think it's going to take a couple of years to sort itself out. And the medical costs that comprise most of the premium dollar? We'll need a longer time period before we can assess what the effect of the ACA is on that.

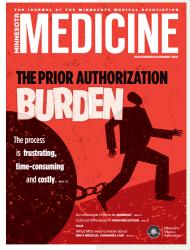
Do you think more businesses are going to get out of insuring employees because of the ACA?

We've seen a decline over the last decade in the percentage of businesses offering health coverage to employees, but I don't think the ACA is likely to accelerate that trend. Cost is one reason why employer coverage has been declining, but there has also been a shift in industries. For example, there are more retail jobs than manufacturing jobs. The industry matters in terms of how prevalent employer-sponsored health insurance is. But most of the surveys of employers that I have seen suggest they intend to continue offering coverage.

What trends are you seeing in employer-sponsored coverage?

Certainly deductibles have been going up for a decade or more. The share of premiums that employees pay has also been going up, but not by as much because employers need a lot of people to sign up for coverage in order to make it worthwhile for them to offer it. So there tends not to be as much movement in the share of premiums that employees pay out of pocket. More of the increases in cost sharing are coming at the point of service.

—INTERVIEW BY CARMEN PEOTA







Call for submissions

Attention medical students, residents and fellows.

Minnesota Medicine is seeking to highlight the work of Minnesota medical trainees. The journal plans to publish select abstracts of original research and clinical vignettes in its April 2015 issue.

Submissions will be evaluated by a panel of reviewers from a variety of disciplines; they will select those demonstrating appropriate quality for publication.

Those whose submissions are published also will be invited to present their work in a poster session at the MMA's 2015 annual conference.

Criteria: Submissions should be no longer than 500 words plus references. Research abstracts should include a brief description of the research problem, methodology, results and a discussion of the findings. Clinical vignettes should include a description of the case, the diagnosis and treatment approach, and a discussion of the implications of the case.

Deadline for submissionJanuary 23, 2015

Submit your abstracts and vignettes at **MinnesotaMedicine.com/Abstracts**

Questions? Contact Carmen Peota at cpeota@mnmed.org



fter physicians at Twin Cities Orthopedics (TCO) recommended that patients have their knee or hip replaced, they used to brace for the inevitable question: "How much will this cost?" And after surgery, they often heard frustrated patients complain about receiving multiple bills—for the facility, for physician services and for continuing therapy.

Asked by enough patients about costs and confusing bills, the practice set out to change things. "We wanted to find a way to simplify the financial side of health care. It's much more complex than it needs to be," says Troy Simonson, CEO of Golden Valley-based TCO. By 2012, they were offering total knee replacement for a flat rate of \$21,000.

Although the concept of bundling payments has been around since the early 1990s, it's only recently that many Twin Cities clinics have tried doing it. Federal

and state reform efforts have stimulated interest in the approach. Minnesota launched a "baskets of care" project in 2009, which had providers, payers, employers and consumers creating a set price for total knee replacement, pediatric asthma care, diabetes care, acute low-back pain care, obstetric care and several other services. The Affordable Care Act required the Centers for Medicare and Medicaid Services to launch a bundling initiative as well. The goal of that effort is to assess whether bundling payments prompts better care coordination, improves quality and leads to more operational efficiency. Although the state's baskets of care initiative didn't catch on, nearly 900 clinics and practices have signed up for the first of the four-phase Medicare pilot.

Interest in bundling payments on the part of clinics and practices has been growing in recent years, says Peter Huckfeldt, assistant professor in the division of health policy and management at the

University of Minnesota School of Public Health. "The underlying issue is that in fee-for-service medicine, you're providing a discrete payment for each individual service, and that really rewards quantity of service rather than quality and coordination," he says. "Bundled payment is meant to reward coordination rather than quantity of services."

Today, physicians and patients are beginning to see advantages to paying one set price for procedures ranging from shoulder replacement to colonoscopy.

VETERAN BUNDLERS

In the Twin Cities, the most prolific bundlers are TCO and TRIA Orthopaedic Center in Bloomington. Both orthopedic clinics had their physicians perform procedures at their own stand-alone, ambulatory surgery centers and had patients recover at nearby nonhospital facilities before they tried bundling.

Early in 2014, TRIA started bundling payments for outpatient shoulder, hip and knee replacements done in its facilities. It is now working to set up bundled-payment packages for surgeries done at Methodist Hospital in St. Louis Park for patients who don't qualify for outpatient surgery, says Mary Haugen, director of nursing and TRIA's ambulatory surgery center.

Park Nicollet, which owns both TRIA and Methodist Hospital, negotiated contracts with four insurance companies. To set the price for the outpatient procedures, the practice provided data from 800 people who had already undergone outpatient procedures, most of which were total and partial knee replacements, and had recovered at a nearby Hilton instead of the hospital. TRIA's price for surgery includes fees for the surgeon, anesthesiologist, facility, a postoperative stay with nursing care, occupational and physical therapy, and lab and imaging work.

Haugen says it gives patients peace of mind knowing beforehand what the total cost of their surgery will be, what their responsibility is in terms of their deductible and co-pay, and what exactly is covered in that fee. "From our perspective, it certainly simplified it for us, and it's really what consumers are looking for," she says. "And we're confident that the quality of care is very strong; we've had 99 percent satisfaction from patients."

At TCO, the bundled price includes pre-op education; fees for the surgeon, the anesthesiologist and the device itself; the ambulatory surgery center's facility fee; medications; postsurgical care; lab work;

trigued, they haven't yet bitten because of billing complications, says Scott Ketover, MD, president and CEO.

Undeterred, the practice instead reached out to employers who self-fund their health insurance programs, pitching the bundled payment approach as both a way to save money on colonoscopies in the short-term and to encourage more employees to get the screening and prevent conditions that require more expensive



COMPANIES ARE HAPPY TO PAY 100 PERCENT OF A BUNDLE AS OPPOSED TO 80 PERCENT OF A MUCH LARGER CHARGE.

-SCOTT KETOVER, MD

and physical therapy. They've negotiated the rate with three insurers—Medica. HealthPartners and PreferredOne—and are talking to other payers. This year, the practice added packages for total hip, shoulder and ankle replacements. So far, 160 patients have experienced the bundled payment approach and feedback has been positive.

INSURANCE ROADBLOCK

Physicians and administrators unanimously agree that convincing insurers to work with them on bundled payments is one of hardest parts of setting up a program, as most insurers have established processes that are difficult to change.

"The benefit from the insurers' perspective is the potential efficiencies that can be gained, but these are very complex systems to set up within an already complex health care system," Huckfeldt says. "They see some potential in it, and the fact that Medicare is really embracing it might be a factor, too."

Seven years ago, St. Paul-based Minnesota Gastroenterology started trying to tempt insurance companies with its proposal for bundled colonoscopy services. The clinic was armed with data from its five ambulatory surgery centers showing costs one-third to one-half of those of others because of lower overhead and the efficiencies of focusing on a small menu of procedures. Although insurers were incare later on. Now five Minnesota-based employers take advantage of its bundledpayment options.

Ketover says employers pay less than \$2,000 for a colonoscopy and \$2,850 for a combined colonoscopy and upper endoscopy, whether done for screening or other clinical purposes. The bundled price includes all physician and facility charges, sedation, pathology, prep kits, nursing support before and after the procedure, and a two-week guarantee, in case patients need postprocedural care.

Ketover says it doesn't take much to convince employers. They simply show them what they've paid previously for colonoscopies and what they would have paid with the clinic's pay-one-price package and "very quickly they see the value," he says. "They can see right away how many tens of thousands of dollars they could save by using the bundle." He adds that companies are happy to pay 100 percent of the bundle as opposed to 80 percent of a much larger charge.

BUILDING BUNDLES, CAPTURING MARKET SHARE

The reason more clinics and practices don't bundle payments is fear that they will lose money if their pricing isn't right. But TCO, TRIA and Minnesota Gastroenterology have found that setting the right price wasn't as difficult as they expected.

Using historical data, Minnesota Gastroenterology determined its average cost for delivering services to a range of patients and added an appropriate margin. The clinic then did market research on its proposed pricing, comparing it with what others charged and what insurers paid. "We do gain on some and lose on some, but the price is established based on our history of doing the procedure," Ketover

Simonson compares determining payments to building a budget, and so far it's worked out well for TCO. "We do take some risk on portions of the services, and we've had some cost us more than what we get paid. That's part of the scenario," he explains.

Simonson says patient demand is growing for this approach, and TCO plans to add other procedures to the bundling menu. "We can tell patients almost to the penny what they will pay," he says. "They love it." MM

Suzy Frisch is a Twin Cities writer.



Single-payer health care

More physicians are considering it, but is it a realistic option?

BY KIM KISER

ichard Horecka, MD, admits he was skeptical when several medical students and residents brought a resolution on single-payer health care to the Minnesota Academy of Family Physicians (MAFP) House of Delegates in 2013. The family physician from Benson, Minnesota, thought it would go down in defeat in the same way resolutions to support such a system had at the academy's national meetings. "I thought it would be a big fight," he told a gathering of physicians

and medical students who came to discuss the issue last summer at the University of Minnesota. "But there was almost unanimous support."

That's because, rather than asking for MAFP's endorsement, the resolution simply called for the academy to study the pros and cons. So when the MAFP board decided to create a task force to explore single payer, Horecka volunteered to lead it. "I realized as a physician who had been practicing for 30 years, I knew very little

about single payer. And instead of being closed-minded, it made sense to me, and to many of our members, to become informed about it," he says.

The task force, which included family physicians from all over the state as well as medical students and residents, met throughout the year. At those meetings, some of Horecka's beliefs were challenged. He became convinced that single payer wasn't "socialized medicine," in which care is provided and funded by the government, or a "government takeover of health care," as some have accused it of being, and that such a system just might work in Minnesota. "I learned that the misconceptions we had in the past about the Canadian or British system were just that—misconceptions," he says. "I think single payer can be

something we could comfortably live with and not have a dramatic change in the way we practice medicine."

The push for single payer

The debate over single-payer health care has been going on in Minnesota for more than 20 years; during nearly every legislative session, proposals start and stall. However, it wasn't until 2007 that physicians truly engaged in the discussions. That year, the Minnesota chapter of Physicians for a National Health Program (PNHP) formed. Their goal: to move to a comprehensive single-payer system that provides coverage for all.

More than 900 physicians and medical students in Minnesota have signed PNHP's resolution supporting single payer. "We have representation across the specialties," says Dave Dvorak, MD, an emergency medicine physician who has been a member for the last four years and is an outspoken proponent of single payer.

Dvorak's work in both the ED and in a clinic that served a low-income population convinced him of the need for single payer. In both settings, he met patients who couldn't afford care even though they had health insurance: There was the young man with an ankle fracture who did not have surgery because he couldn't come up with the \$3,000 he needed to pay his deductible; the woman who didn't refill her epi pen prescription because of the \$200 cost and ended up in the ICU following an anaphylactic reaction; the single mom with a high-deductible policy who spent 40 percent of her income one year on premiums and costs for a two-day hospitalization. "It convinced me this was a system that had to change," he says.

He says the Affordable Care Act (ACA) hasn't solved that problem. Although it has brought more people onto the health insurance rolls, many have found they can only afford policies with high deductibles. "We've entered the era of the \$5,000 deductible," Dvorak explains. "Patients think they have insurance coverage until they get sick and realize they have to come up with \$5,000 to pay bills and their budget doesn't allow for it." A Minnesota Depart-

A lesson from Vermont

In 2011, Vermont Gov. Peter Shumlin signed a law to build a state-based single-payer health care system by 2017. The idea was to provide comprehensive, affordable, high-quality, publicly financed health coverage to all residents. The plan called for using a combination of new tax revenue and federal dollars to fund the program. However, on December 17, 2014, Shumlin withdrew his support for the plan. In a blog post on his website, Shumlin noted that providing coverage to all according to their ability to pay and getting businesses out of health care decision-making wasn't

"The cost of that plan turned out to be enormous, requiring an 11.5 percent payroll tax on all Vermont businesses and a public premium assessment of up to 9.5 percent of individual Vermonters' income," he wrote. In addition, the phase-in for small businesses and those that do not currently offer coverage to their employees would have added another \$500 million to the tab at a time when the state's economy is still recovering from the recession.

Shumlin said his decision was also based on the fact that the federal funds available to the state for the transition would be more than \$150 million less than anticipated. Although the governor may have given up on the idea of single payer for now, he said he plans to continue with efforts to reduce the number of uninsured in the state, contain health care costs and support primary care for all Vermonters.—K.K.

ment of Health and State Health Access Data Assistance Center (SHADAC) study found that in 2013 nearly 19 percent of Minnesotans reported forgoing medical care—not filling prescriptions, putting off recommended tests and procedures, not following up with their physicians because of the cost; 28 percent reported problems with paying medical bills or getting needed care because of costs. Dvorak notes that this is neither a new phenomenon, nor the fault of the ACA. "All you really need to do is look back over 10 to 20 years to see that these trends [the consequences of high-deductible health plans] have been accelerating," he says.

In addition to concern for patients with inadequate coverage or high deductibles, frustration with the administrative work required by insurers is driving physicians toward single payer. "The whole idea of prior authorization and visit limits and restricted networks—when you add it up, the burden falls on doctors and that's reaching somewhat of a breaking point,"

says Chris Reif, MD, MPH, a family physician with Community-University Health Care Center and a member of the MAFP task force.

"I think those two things: administrative work getting worse and worse and seeing more people with insurance but who still have these big burdens—they compromise my job and mission to provide care," he explains.

Those who favor single payer see it as solving both problems. They also see it as a way to streamline an insurance industry that currently includes Medicare, Medicaid, the VA, self-funded plans and more than 1,000 private insurers—all of which have their own drug formularies, provider networks and prior authorization require-

Dvorak cites a 2003 New England Journal of Medicine article that noted 31 percent of health care dollars go toward administration in the United States, compared with 16.7 percent in Canada. "The money spent on overhead would be redirected toward health care," he says. A 2012 Lewin Group analysis estimates that with a single-payer system, everyone in the state would have a basic level of coverage and that total health spending would be reduced by \$4.1 billion a year.

A feasible option?

Although PNHP makes the case that reallocating money spent on overhead and administration, consolidating the public dollars currently received and imposing a modest tax on individuals (based on one's ability to pay and in lieu of premiums, deductibles and co-pays) would adequately fund a single-payer system, some argue that such sources may not be sustainable. Lynn Blewett, PhD, a professor in the University of Minnesota School of Public Health and director of SHADAC, who also spoke at the August gathering, noted that a single-payer system could be more vulnerable than our current system during a recession, when tax revenues are lower.

Also, a state-based single-payer system wouldn't truly encompass everyone because employers that self-insure are governed by the federal ERISA law, rather than state law. As such, they would be exempt from participating. "The states have no regulation over self-insured plans," Blewett says. In order for that to happen, "there would need to be some kind of waiver or change to the pension law that oversees self-insured plans." Critics also argue that single-payer advocates don't take into account the full effect a switch to single payer would have on the health insurance industry, which employs approximately 20,000 people Minnesota. The Lewin Group estimates about 16,700 of them, as well as those who handle insurance functions for hospitals and clinics, would lose their jobs if the state were to move to single payer. Minnesota singlepayer advocates have recognized the need to devote resources to the retraining of those displaced workers.

What's next?

Blewett says creating a single-payer system in Minnesota would be difficult because (continued on page 20)



Speaking from experience

A view of the **Canadian health care system** from a physician who practiced there.

Canadian-born Lee Kurisko, MD, started out a believer in his country's single-payer health care system. "I thought it was the morally just thing for government to provide health care and make sure people got health care," he says.

But after working as both a family physician and later a radiologist in that system, he started seeing things differently. While serving as medical director for diagnostic imaging at Thunder Bay Regional Hospital in Thunder Bay in the late 1990s, he saw patients who had waited as long as 13 months for an MRI and seven for a CT scan.

"Every day, we would get 20 to 25 requisitions for MRIs coming in. At the time, we could only do 15 or so. I would arbitrarily try to triage who got their scan based on a one-line clinical history, which was hard to do, and it was impractical for me to call the physician who referred the patient and ask about the true nature of the problem," he recalls. "From time to time, I would triage someone to the

end of the line and there was some horrible problem like a tumor or spine infection that should have been dealt with earlier. I had a hard time living with that."

Kurisko says such experiences led him to give up his practice in Canada and move to the United States in 2002. Today, he works for Consulting Radiologists Ltd., splitting his time between St. Frances Regional Medical Center in Shakopee and St. Luke's Hospital in Duluth.

He says it frustrates him when he hears people in this country suggest that moving to a single-payer system would solve the problems in our health care system. "It's not the utopia people make it out to be," he says, adding that supporters often don't know the whole story.

Kurisko explains that rising costs, unchecked demand for care and stagnant funding have led to a number of problems in Canada, one of which has been a doctor shortage, especially in rural parts of the country. He believes a federally commissioned study done approximately 20 years ago, the Barer-Stoddart report, that recommended cutting medical

school enrollment and recruitment of international medical graduates in order to control costs is to blame. "They overshot the market a bit and ended up with far fewer doctors than intended," Kurisko says. (The Canadian Institute for Health Information notes that although the number of doctors per capita has been rising since about 2006, there is still a shortage in rural areas and many Canadians still do not have a primary care physician.)

When Kurisko was practicing in Thunder Bay, the Ministry of Health considered 13 radiologists to be an adequate number to serve the area. The community had only three, all of whom were members of his practice. "We were desperately overworked," he recalls.

When Kurisko went to the hospital's CEO to ask for a Rolloscope to allow them to read a larger volume of X-rays, he was told there wasn't money in the budget and to take



his case to the Ministry of Health. Three years later, the hospital got a Rolloscope but couldn't pay a clerk to load the films. "It was a microcosm of how the health care system works. Everything is allocated by the Ministry of Health. They're the payer and they control the purse strings."

In contrast, when he and his partner asked for a Rolloscope at St. Frances,

they had one within a month. "Why the difference? The hospital and radiology group are functioning based on profit. It makes sense to invest capital to improve services to deliver better and more care." he savs.

Kurisko admits physicians have a point when they talk about the fact that Canada has fewer administrative burdens than the United States and that nearly everyone has access to health care. However, because of the waiting times for some procedures, more and more people are going outside the system for care—most often to the United States—if they can afford it. Recently, he brought his own father to Minnesota for a procedure.

Kurisko says many don't realize the two systems are similar in one very important way: they both rely on third-party payers. "Someone else is paying the bills, so people live with the fantasy that they can have unlimited access to all the health care they'd ever want with no attention to cost at all," he says. "That's simply not realistic."—K.K.

University of Minnesota - Continuing Professional Development



(formerly the Office of CME)

Education is essential to achieving and sustaining quality healthcare. Through partnership with healthcare leaders, our educational activities help advance quality improvement and patient care initiatives.

2015 CPD Activities

(All courses in the Twin Cities unless noted)

www.cmecourses.umn.edu

LIVE COURSES

Pediatric Dermatology Progress & Practices

February 20, 2015

Fundamentals of Critical Care Support March, 2015

Integrated Behavioral Healthcare Conference: Building Partnerships & Teams for Better Care March 13, 2015

Advanced Critical Care for Hospitalists March 23-26, 2015

Cardiac Arrhythmias: An Interactive Update for Internal Medicine, Family Medicine & Pediatrics April 3, 2015

Psychiatry Update Spring 2015 April 9-10, 2015

Maintenance of Certification in Anesthesiology (MOCA) Training April 18, 2015

Live Global Health Training (weekly modules) May 4-29, 2015

Midwest Cardiovascular Forum -Controversies in Cardiovascular Disease

May 16-17, 2015

Bariatric Education Days: Advances in Bariatric Care May 27-28, 2015

Workshops in Clinical Hypnosis June 4-6, 2015

Topics & Advances in Pediatrics June 4-6, 2015

ONLINE COURSES (CME credit available) www.cme.umn.edu/online

- Adolescent Vaccination AVAILABLE NOW!
- Nitrous Oxide for Pediatric Procedural Sedation
- Global Health
 - To include Travel Medicine & Refugee Health
 - Family Medicine Specialty
 - Pediatric Specialty

For a full activity listing, go to www.cmecourses.umn.edu



University of Minnesota

Medical School
Office of Continuing Professional Development 612-626-7600 or 1-800-776-8636 • email: cme@umn.edu

Promoting a lifetime of outstanding professional practice

(continued from page 18)

of the number of insurers in the state. "We have four or five large insurers and enrollment is pretty evenly distributed," she says. "They would be resistant." She also says the public perception about single payer leading to higher taxes, government control and the potential rationing of health care would likely quash the idea. "I think some people are so anti-government and anti-consolidation that it would be a big hurdle to get over," she says.

She suggests there may be other ways of working toward some of the goals of single payer without a complete restructuring of

the health care system. "If the goal is universal coverage, we almost have that and there may be a more incremental approach to getting the last 260,000 people insured. Making a radical change to single payer to get a small number of people covered, I'm not sure you'd go that route," she says. If it's cost containment, she says, it would likely mean a movement to a fee schedule that would be more on par with Medicare's or Medicaid's than those of private insurers. "I think there would be a lot of push-back from providers who are not government employees as well as from health plans and employers."

Dvorak says PNHP will work with Sen. John Marty, who has introduced legislation to create a single-payer system every year since 2009, to get legislative approval to seek a state innovation waiver from the federal government. The waiver would allow Minnesota to redesign aspects of the health care system, as long as they met the larger goals of the ACA. The first waivers will be granted in 2017.

Last year, after the MAFP task force presented its report on single payer to its House of Delegates, the House passed a resolution to continue the task force for another year and to promote single payer

The many faces of single-payer health care

In a talk to physicians about single-payer health care last summer, Lynn Blewett, PhD, a professor in the University of Minnesota School of Public Health, described four countries' systems. In all of them, government pays for the majority of care and private health insurance plays a limited role. Here's a snapshot of what they look like:



England

The National Health Service funds 94 percent of health care. Approximately 11 percent of residents have supplemental insurance (usually an employment benefit) to pay for

elective surgeries, consultations and stays in private facilities.

- System is funded through general tax revenue and payroll tax
- Most physicians are in private practice, but hospitals are publicly owned; general practitioners serve as gatekeepers
- Nearly all health expenditures are paid for by public sources
- Outpatient drugs have a co-pay.



Canada

Universal public insurance program is administered by the provinces and territories; about 67 percent of Canadians buy private supplemental insurance for expenses that aren't covered.

- System is funded through general tax revenues; three of Canada's provinces (Alberta, British Columbia and Ontario) charge additional premiums
- Most physicians are in private practice
- Approximately 70 percent of total health care spending is paid for by public sources. The remainder is paid for out of pocket or through private health insurance (eg, dental care, over the counter and prescription drugs, vision care).

as one financing method that could meet the principles of health care reform laid out by the national academy (coverage for all, access to high-quality affordable care without the risk of financial ruin, good stewardship of community resources, less administrative burden and liability reform, among others).

Reif says they're hoping to invite not only family physicians but also pediatricians, internal medicine physicians and other primary care providers to take part in the discussion about single payer. "I'm imagining this is a conversation that will be on the agenda in Minnesota and nationally for years to come," he says. "The more professional doctor groups that will be part of it, the more beneficial it will be." MM

Kim Kiser is an editor of Minnesota Medicine.



Germany

Statutory health insurance system is made up of 134 private sickness funds and provides universal coverage; about 11 percent of the population opts out

and instead purchases private health insurance coverage

- System is funded through federal taxes and taxes on employers and employees (or retirees); some sickness funds charge premiums
- Most physicians are in private practice
- Nearly 58 percent of health expenditures are paid for by the sickness funds; the remainder is paid for out of pocket and through private insurance.



Norway

National health service provides coverage for all (administered through Ministry of Health and Care Services and four regional health authorities;

individual municipalities are responsible for organizing and delivering care); less than 10 percent of the population has private supplemental coverage (usually purchased by employers for employees to ensure faster access to specialists)

- System is funded through general tax revenue
- Most physicians are in private practice
- Public spending accounts for 85 percent of health care expenditures; out-of-pocket spending (co-pays) accounts for the remainder (cost-sharing ceiling of \$340 in 2013); private supplemental insurance accounts for less than 1 percent of health care spending.

Source: Commonwealth Fund, International Profiles of Health Care Systems, 2013

When you need it.



Medical professional liability insurance specialists providing a single-source solution





HOWARD BELL



High-deductible health insurance

policies are causing financial headaches for clinics and hospitals—and doctors say they're hurting patient health.

hen physicians at Multicare Associates, a primary care practice with offices in Fridley, Blaine and Roseville, started noticing more patients with high-deductible health insurance policies skipping or delaying visits for routine services, and when administrators noticed them not paying their bills when they did come in for care, they realized they needed to do something. In 2012, they started offering a product to address some of those problems.

Called PrimaCare Direct, it works much like a fitness club membership. Patients (in some cases, their employers) pay \$75 a month and in return get all the primary care they need, including physicals and well-child checks, office visits for problems ranging from bee stings to back pain, lab work and radiology, and occupational health care—services that typically would fall within their insurance policy's deductible.

Last May, the Minnesota Healthcare Network (MHN), which includes 38 primary care clinics, became a financial partner of PrimaCare Direct. Today, 15 of the network's primary care clinics and one specialty clinic are part of the program. (The clinics pay \$1,000 per physician to belong.) Multicare Associates is one of those practices. "PrimaCare reduces the negatives of high-deductible policies, which discourage people from getting the primary care they need," says Matt Brandt, Multicare's CEO.

So far, about 1,400 Minnesotans have signed up for PrimaCare Direct. Initially, each goes to their clinic for a "mega-visit" to assess their health status and discuss with their doctor how they can get the most benefit from the program. Then they can visit, call or email their doctor or a nurse practitioner, physician assistant, chronic disease nurse or health coach, and not worry about getting a surprise bill. "For a patient with chronic sinus infections, for example, phone calls and emails will usually work just fine

ON THE COVER

once a treatment plan has been established," says John English, MD, executive director of MHN. "Patients buy into it because they see that we're creating a personalized plan for them." He notes overuse hasn't been a problem thus far. "None of our clinics has patients calling or emailing too much, or scheduling unnecessary appointments."

English says PrimaCare Direct has wide appeal. Patients like it because they know up front how much their primary care costs will be and because many can apply the monthly fee toward their annual deductible. "And employers reap the benefits of lower claims costs and ultimately lower insurance premiums because it encourages patients to manage their health at the less-expensive primary care level and avoid specialty care," he says. Clinics buy in because it helps their bottom line. And doctors like it because they're getting paid for providing care rather than for visits or procedures. "Physicians work for the patient, not the insurance company," English says. "Health plans never even know that services were provided."

PrimaCare Direct is a version of a health care delivery model called direct primary care that's catching on nationally—in large part to better meet the needs of the growing number of people with high-deductible health insurance plans. To English, Brandt and a growing number of others, direct primary care addresses two of the biggest problems caused by those plans: patients' postponing care and failing to pay their bills.

Greater interest, higher deductibles

Although they used to be popular mostly among individuals with higher incomes, high-deductible plans are now common among people of all means. Nationally, 22 percent of working people with private insurance have policies with high deductibles, a number that's grown by 15 percent every year since 2011, according to the 2014 Kaiser Family Foundation Employer Health Benefits Survey. "We don't have

THE HEALTH SAVINGS ACCOUNT

People with high-deductible health plans can open a Health Savings Account (HSA) and put pre-tax dollars into it to help pay their medical bills until they meet their deductible. For 2015, they can contribute as much as \$3,550 for individuals and \$6,650 for families, \$1,000 more for those over 55. About 40 percent of people with high-deductible policies have an HSA, according to a 2014 national survey by the Associated Press and the University of Chicago's NORC Center for Public Affairs Research. University of Minnesota health economist Stephen Parente, PhD, says employers can kick in, too, but fewer than half do. A 2012 employer survey by America's Health Insurance Plans Center for Policy and Research found the average contribution is about \$900 for individuals and \$1,600 for families.— H.B

numbers for Minnesota," says Stephen Parente, PhD, professor of finance at the University of Minnesota's Carlson School of Management and the Minnesota Insurance Industry Chair of Health Finance. "But



"PARENTS DELAY BRINGING THEIR CHILDREN IN OR THEY SKIP CARE ALTOGETHER BECAUSE THEY CAN'T AFFORD TO PAY THE HIGH DEDUCTIBLES."
MARILYN PEITSO, MD

it's likely much higher than 22 percent because Minnesota has been assertive about offering these policies as a way to contain costs. We're 10 years ahead of the rest of the country."

High-deductible plans are popular on MNsure, the state's health insurance exchange. And the annual deductibles in those plans, which range from \$2,500 to \$6,450 for individuals and \$4,000 to \$12,900 for families, are among the highest in the nation for Affordable Care Act (ACA)-compliant policies. That's because Minnesota's premiums are among the lowest, according to a Robert Wood Johnson Foundation study. Yet most high-deductible policy holders get them through their employer, and many employer-sponsored policies are exempt from ACA caps on deductibles. "So a person's out-of-pocket

responsibility can be much higher," Parente says.

Delayed care

St. Cloud pediatrician Marilyn Peitso, MD,

sees how high deductibles affect patients in her practice almost every day. She says it's not uncommon for parents with such plans to not fill prescriptions for ADHD drugs or antibiotics or to postpone their children's visits for chronic conditions such as asthma or diabetes. Elective procedures such as tonsillecto-

mies and placement of ear tubes are often put off until the end of the year, when the family's deductible is more likely to be paid off. "Parents delay bringing their children in or they skip care altogether because they can't afford to pay the high deductibles," she says, adding that she often knows she won't see those kids "until something goes really wrong."

Adults with high-deductible health plans delay needed care as well, says Mark Pottenger, administrator for Northwest Family Physicians, which has clinics in Crystal, Plymouth and Rogers. He says that a number of their patients with chronic conditions such as COPD, diabetes and hypertension aren't coming in or are waiting until they get sicker before they come in. "We know many prescriptions don't get filled—a problem that's gotten

worse because of high-deductible policies," he says. "That's not good health care."

In theory, the policies aren't supposed to encourage patients to skip necessary care. But most patients can't tell the difference between what's necessary and what's not. "Patients were supposed to respond to increased cost-sharing by cutting back on unnecessary care, but a number of studies show they've responded by reducing all of their medical care—necessary and unnecessary," says Katy Kozhimannil, PhD, assistant professor at the University of Minnesota's School of Public Health. In practice, she says, many of these policies have been a "blunt instrument" for cutting costs. "Patients can't easily assess the value of a service when they don't have good information about costs and which services are considered necessary care."

A 2014 survey by the Associated Press and the University of Chicago's NORC Center for Public Affairs Research found 29 percent of people with high-deductible policies did not go to the doctor when sick or injured on one or more occasions, compared with 15 percent of people who have traditional policies. Twenty-four percent said they skipped physicals or other preventive care, compared with 14 percent of those without high-deductible plans. Twenty-three percent of those with highdeductibles said they skipped one or more recommended medical tests or treatments versus 15 percent of those without. And 24 percent said they had to use some or all of their savings to pay for care as compared with 18 percent of those without highdeductible policies.

Patients are skimping on care in the hospital as well as the clinic. "We see more patients in the ED leave early or choose not to have a test because of the cost," says Robert Thomas, MD, president and CEO of Emergency Physicians Professional Association, whose 126 physicians work at five hospital emergency departments in the Twin Cities. "We've had patients come into the ER with abdominal pain and decide not to have a CT scan to rule out appendicitis. They come back a day later with a perforated appendix. Of course this happens with people who have lowerdeductible policies, too, but we're seeing it more because of high-deductible policies."

High deductibles

also exacerbate the end-of-the-year rush to have surgery, says anesthesiologist Mark Eggen, MD, who recently retired from Midwest Anesthesiologists, a 20-physician group serving Mercy and Unity Hospitals in Coon Rapids and Fridley. He notes that the scramble for surgery has gotten worse every year for the past 20 years. "Anything that can be

Unpaid bills

delayed is," he says.

High-deductible health insurance is taking a toll on clinics as well as patients. "Our bad debt is up, our days in accounts receivable are up, and we know a big part of it is caused by high-deductible policies," Brandt says. He explains that all high-



"OUR BAD DEBT IS UP, OUR DAYS IN ACCOUNTS RECEIVABLE ARE UP, AND WE KNOW A BIG PART OF IT IS CAUSED BY HIGH-DEDUCTIBLE POLICIES." MATT BRANDT

eductible plans are doing is shifting the cost of care to patients, many of whom can't afford to pay. And that's put the burden of collecting that money on clinics.

Deductibles and co-pays account for more of Multicare's accounts receivable than they use to (only a small percentage of their patients are currently signed up for PrimaCare Direct). In 2008, the amount patients were required to pay out of pocket was approximately 14 percent of total revenue. By 2014, out-of-pocket payments accounted for 23 percent of revenues. "Many people get these policies because they can't afford the higher premiums of a lower-deductible policy," Brandt



ON THE COVER

says. "But if you can't afford a higher premium, how can you expect to afford the deductibles?"

Pottenger says nonpayment hits inde-

pendent primary care practices harder than others. "We don't have the cash reserves or other finan-



than send the bill to a collection agency, the practice has little recourse if a patient doesn't pay. "And we really don't want to ruin someone's credit rating or their life

"THESE POLICIES HAVE PROMPTED US TO HAVE BETTER COMMUNICATION WITH PATIENTS, WHICH IS A GOOD THING. THAT HASN'T MADE THEM MORE LIKELY TO PAY THEIR BILL, BUT IT DOES ALLAY THE PATIENT'S MEDICAL CONCERNS AND PERHAPS LESSENS THE STICKER SHOCK WHEN THEY GET THE BILL." ROBERT THOMAS, MD

because they couldn't pay their medical bill," Thomas says. "It's a very uncomfortable process for doctors."

Nearly all hospitals in Minnesota are seeing the amount of money owed them, the number of people owing and the number of days the debt is outstanding growing, says Matt Anderson, senior vice president of policy and strategy for the Minnesota Hospital Association (MHA). "It's a huge challenge," he says. "No hospital I know of has a solution."

As a result, the amount of uncompensated care has grown from \$208 million in 2006 to \$322 million in 2013, a 55 percent increase, according to MHA figures. Anderson says the fastest-growing portion of uncompensated care is for patients with high-deductible policies. "It used to be that most uncompensated care was for the uninsured. Now it includes many insured patients who can't afford to pay their high deductibles."

Working the problem

With more and more individuals struggling to pay higher and higher deductibles, hospitals and clinics are finding they need

> to do more upfront work with patients. Brandt says their registration staff spends time with new patients discussing what their

payment responsibilities will be. He notes that many don't understand how a highdeductible policy works. Hospitals are doing the same for patients having elective and outpatient procedures, Anderson says. "We try to increase their health insurance literacy."

Yet patients often resist talking about medical bills, says Tom Feldhege, CFO of CentraCare Clinic in St. Cloud, whose bad debt has jumped 8 percent in the past year. "They'll gladly talk to a financial counselor about how they're going to pay for their children's braces," he says. "But when they need to do the same for necessary medical care, they're not always comfortable with that, especially when they fear others may be hearing the conversation."

Thomas says that although physicians aren't talking with patients about payment issues in the ED, they are trying to mitigate the impact of high-deductible plans. "As physicians, we prefer not to know what a patient's coverage is. We don't

cial resources that system-owned clinics have," he explains. The amount of money patients owe Northwest Family Physicians has grown in four years from 10 percent to 22 percent of that which is billed. "Collecting deductibles for high-deductible policies is our biggest problem, and there seems to be no stopping it." Pottenger says they eventually do collect 80 percent to 85 percent of what patients owe (minus the cost of staff time and payments to outside collection agencies). "But it can take a lot of time and effort." And that's not sustainable.

In just the past year, Emergency Physicians Professional Association has seen a 10 percent jump in debt that never gets collected, much of which it attributes to people having high-deductible policies. Thomas says he longs for the days when most of a patient's bill was paid by the insurance company. "We could talk to patients about their medical problem, not how they're going to pay." He says other

DIRECT PRIMARY CARE

WHAT IT COVERS	WHAT IS DOESN'T
Yearly physical	Cancer treatment
Cast and X-ray for hairline fracture	Surgery to reset a bone and a major break
Strep throat culture	Severe illness in the night requiring an ED visit
Asthma education and testing	Severe asthma attack requiring an ED visit
Skin biopsy	Skin cancer treatment
Pap smear and annual women's well exam	Childbirth

want it to affect our medical judgment," he says. Instead, he and his partners are trying to better explain the services they're providing to their patients, telling them step-by-step what they did, why they did it, what they ruled out and why it's safe to go home. "These policies have prompted us to have better communication with patients, which is a good thing. That hasn't made them more likely to pay their bill, but it does allay the patient's medical concerns, and perhaps lessens the sticker shock when they get the bill."

Many want insurance companies to refine their plans so co-pays are reduced and services of high clinical value are exempted from deductibles. Brandt even argues that primary care should be 100 percent exempt from the deductible. "Investing in primary care—not making patients pay more—is the best way to lower health care costs," he says. "And primary care management of chronic conditions is where the biggest savings are." He cites studies that show primary care physicians can handle 80 percent of a patient's health care needs and that more primary care per capita lowers health care costs. "So if we believe a strong relationship with a primary care doctor helps lower costs," he says, "Why create a health insurance policy that encourages patients to avoid their primary care doctor?"

What's next?

In the meantime, direct primary care is alleviating some of the problems caused by high-deductible health insurance policies. Brandt notes that PrimaCare Direct patients tend to be more compliant about going to follow-up visits, getting tests done and not delaying care. He says Multicare has not had a problem with nonpayment from them. "And clinic overhead is lower because we don't have as many deductibles and co-pays to collect, or as many bills to send out," he adds.

The university's Parente points out that the debate over traditional versus high-deductible policies eventually may fade as the difference between the outof-pocket costs for both narrows. "We're close to having two flavors of the same drink," he says. "Do you want to pay more out of pocket for deductibles and less for premiums and co-pays? Or do you want to pay more out of pocket for premiums and co-pays and less for deductibles? The maximum out-of-pocket is often about the same." The question then becomes: Is making patients pay more out of pocket the best way to lower costs and improve health?

For now, high-deductible policies are here to stay. And as Parente points out, having a health insurance policy with a high deductible is an improvement over being uninsured. "Any insurance is better than no insurance," he says. MM

Howard Bell is a medical writer and frequent contributor to Minnesota Medicine.



Mayo School of Continuous Professional Development

REGISTER TODAY!

Registration and additional course information can be found on our course website: www.mayo.edu/cme/pain2015

Learn strategies and medication management to treat patients with acute and chronic pain.

PAIN MEDICINE FOR THE NON-PAIN SPECIALIST

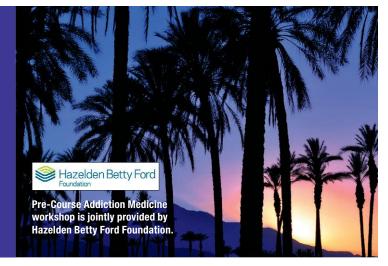
JW Marriott Desert Springs Resort & Spa Palm Desert, CA March 12-14, 2015

March 11, 2015 - Optional Pre-Course Workshops:

- Addiction Medicine for Primary Care Providers
- Palliative Care Pre-Course Workshop

Course Highlights:

- Hands-on Physical Exam and Injection Workshops
- · Obtain Pain Management related CME credit
- ABFM-Self Assessment Module (SAM) Pain Management
- Earn up to 28.75 AMA PRA Category 1 Credits[™]



CAUTIOUSLY OPTIMISTIC

A 2015 Legislative Forecast



BY DAN HAUSER

hen the 2015 legislative session begins on January 6, lawmakers will be dealing with a budget surplus of more than \$1 billion and a shift in

This could prove to be both good and bad for physicians. Good because with a surplus there shouldn't be as much wrangling over resources. Bad because with different parties controlling different chambers—the Republicans took back control

of the House of Representatives in November—it may lead to more political positioning and gamesmanship.

In other words, the MMA's legislative team will have its hands full.

"We're cautiously optimistic that we'll be able to get most of our goals accomplished during the session," says Dave Renner, MMA director of state and federal legislation. "Obviously, health care is a big-ticket item and gets a lot of scrutiny by lawmakers. But we've worked hard to build alliances with legislators in both parties and in positioning Minnesota as a health care leader. The folks at the Capitol want what's best for patients."

MMA priorities for 2015

The MMA's Board of Trustees identified legislative priorities at its November meeting, and the Board's executive committee approved them in early December.

Here's a breakdown of the priorities for the upcoming session:



PRIOR AUTHORIZATION. The MMA is looking at limiting medication prior authorization. It will promote legislation to increase disclosure and transparency related to medication prior authorization require-

ments that limit patient access to needed drugs.



MEDICAID REIMBURSEMENT. The Affordable Care Act increased Medicaid payments for certain primary care services by about 20 percent. That increase ended December 31. The MMA will advocate for re-

instating the payment bump into the future.



PRIMARY CARE IN UNDERSERVED

AREAS. Minnesota has loan-forgiveness programs for physicians willing to practice in rural and underserved urban areas. If physicians commit to at least three years at

one of these locations, they can receive \$25,000 per year in loan forgiveness for up to four years. The MMA team will push for nearly doubling state funding for loan forgiveness from \$790,000 to \$1.295 million and targeting the new funding to primary care physicians.



INTERSTATE LICENSURE. The Federation of State Medical Boards has created a new system to expedite licensure for physicians who want to practice in multiple states. The legislation will authorize the creation

of a national commission that will review physician eligibility and assist with the licensure by the other states. It also will help with those practicing via telemedicine.



REDUCING NICOTINE'S HARM.

Tobacco and nicotine dependence remain a problem in Minnesota. Although the Legislature increased regulations on e-cigarettes last year,

more needs to be done. The MMA will pursue additional safeguards for clean indoor air by prohibiting vaping in bars and restaurants, and push to limit the sale of flavored tobacco products to minors.



PROVIDER TAX. The 2 percent tax often called "the sick tax" is scheduled for repeal at the end of 2019. The MMA remains committed to its repeal and will be working in

2015 to remind legislators that it must go away.

Dealing with the surplus

The MMA will be aided in its efforts by the fact that the Legislature will be working with a budget surplus. The surplus is a result of higher-than-expected revenue, primarily coming from income taxes, and lower-than-anticipated spending, primarily in the Health and Human Services (HHS) area. This lower HHS spending is largely attributable to lower-than-expected enrollment in Medical Assistance (MA) and lower-than-expected managed care rates.

"There's no guarantee that there will be HHS spending increases either through new programming or higher reimbursement rates, but we certainly have a better chance than if we were dealing with a deficit," notes Eric Dick, the MMA's manager of state legislative affairs.

Gov. Mark Dayton will use the forecast to develop his budget proposal, which he will present to the Legislature later this month. Lawmakers will craft their own budget once the next set of budget figures are released in early March.

The law mandates that a third of the state's surplus (\$183 million) be diverted to the state's budget reserve to mitigate effects of future downturns. At this point, it is expected that the state will see a surplus of more than \$1 billion in the 2016-17 biennium.



Dave Thorson MD



Mandy Rubenstein



Cindy Firkins Smith, MD



Kathleen Baumbach





Evelyn Clark, JD

MMA in Action

MMA President Donald Jacobs, MD, former Board Chair Dave Thorson, MD, and Mandy Rubenstein, manager of physician outreach, attended the Stearns Benton Medical Society's annual meeting in November.

Cindy Firkins Smith, MD, the MMA's immediate past president, continues serving on Gov. Mark Dayton's Blue Ribbon Commission that is examining how to ensure the University of Minnesota Medical School is a national leader in medical training, research and innovation. She also spoke at a wine and cheese event in Minneapolis sponsored by University of Minnesota Women in Medicine and Minnesota Women Physicians. The MMA's Kathleen Baumbach and Linda Vukelich, executive director of Minnesota Psychiatric Society, also took part in the

Dave Renner, MMA director of state and federal legislation, attended the Lake Superior Medical Society legislative dinner in late November in Duluth.

Eric Dick, MMA manager of state legislative affairs, presented the MMA's legislative priorities for the 2015 session to members of the Rural Health Advisory Commission (RHAC) in November in St. Paul. As part of the Minnesota Department of Health, the RHAC serves as a statewide forum for health care issues of particular concern to rural Minnesota. The 15-member panel includes physicians, consumers, representatives from rural hospitals, lawmakers from greater Minnesota and others. The RHAC is currently chaired by **Daron Gersch**, MD, an MMA member and family physician in Albany.

Dick also gave an election recap and legislative preview at two Rochester events in mid-November. He was joined by MMA staffers Baumbach, Evelyn Clark and Brian Strub, and Zumbro Valley Medical Society Executive Director John Shonyo.

In December, Barbara Daiker, MMA manager of quality, presented "Quality Measurement in Minnesota" to Methodist Hospital family medicine residents and physicians with Sanford Health in Detroit Lakes. She also served as a reviewer for Health Information Exchange certification in mid-December.

News Briefs



Day at the Capitol set for March 11

The MMA'a annual Day at the Capitol event, during which physicians meet face to face with their state senator and representative to advocate for pro-medicine legislation, is Wednesday, March 11. Because of the extensive renovations underway at the Capitol, the

2015 event will take place at the DoubleTree by Hilton Hotel St. Paul Downtown at 411 Minnesota Street in St. Paul.

MMA voices concerns with medical cannabis registry rules

In November, the MMA sent a letter to Minnesota Commissioner of Health Ed Ehlinger, MD, citing several concerns with the state's draft rules for its new medical cannabis registry. The health department is expected to finalize those rules by the end of January. In the letter signed by President Donald Jacobs, MD, the MMA requests clarity on the following topics: a physician's choice to participate in the registry, the registry's reporting requirements, and termination of the physician-patient relationship. The letter also called for a moratorium on new qualifying conditions.

MMA board approves measure to expedite licensing

In November, the MMA's Board of Trustees voted to support a proposed compact that would establish an expedited process for physicians to obtain licensure in other states. The compact, which was drafted by the Federation of State Medical Boards, would establish a commission that would facilitate licensure in participating states. However, physician licensure would continue to be state-based. In order to join the compact, Minnesota must pass legislation adopting the compact language.



Donald Jacobs, MD

Jacobs testifies before legislative commission

MMA President Donald Jacobs, MD, testified before the Legislative Health Care Workforce Commission in November asking the group to expedite creation of a council that would more closely examine the state's health care workforce needs, expand funding for loan forgiveness and maintain the ACA Medicaid payment bump. Since 2012, the MMA

has made expanding Minnesota's primary care physician workforce one of its top priorities. Experts are projecting a shortage of nearly 1,200 primary care physicians in Minnesota in the next 16 years.

Public programs develop uniform approach toward opioids

As of January 1, the state's Medicaid and MinnesotaCare programs (both fee-forservice and managed care) will implement uniform policies for the prescribing of highrisk medications including prescription opioids. In the spring of 2014, the Minnesota



Department of Human Services (DHS) developed the Universal Pharmacy Policy Workgroup to help address the state's prescription drug abuse epidemic. The workgroup included representatives from DHS, Blue Cross Blue Shield of Minnesota, UCare, HealthPartners, Itasca Medical Care, Medica, PrimeWest, South Country Health Alliance and Metropolitan Health Plan. Questions can be directed to the Minnesota Health Care Programs Provider Call Center at 651-431-2700 or 800-366-5411.

MMA member joins AAFP board of directors

MMA member Lynne Lillie, MD, FAAFP, has been named to the board of directors of the American Academy of Family Physicians (AAFP). Lillie is a family physician who practices with Mayo Clinic Health System in Red Wing. Her clinical focuses are geriatrics, women's health and dermatologic procedures. Prior to joining Mayo Clinic Health System, Lillie served as the medical director for Woodwinds Hospital in Woodbury. The AAFP represents 115,900 physicians and medical students nationwide.



Nearly three dozen physicians gathered to raise funds for the MMA Foundation.

Foundation raises more than \$100,000 at new event

More than 30 MMA members and their guests gathered for the first annual Care Where It Counts fundraiser for the MMA Foundation at the University of Minnesota's McNamara Alumni Center in October. The event raised more than \$100,000 to support the Foundation and its programs including scholarships for medical students and improving access to care in medically underserved communities throughout Minnesota. Donors can add their support for Care Where It Counts by calling 612-362-3767. VIEWPOINT

Physicians need to lead on the issue of cost

ost is one of the things people fear most about health care. This is certainly understandable. Not only are health care costs high, it's difficult to know the true price of medical tests, procedures, hospitalizations, drugs, etc.

Some people argue that profits and administrative costs of insurers are the biggest drivers of cost, while others cite the high cost of professional liability insurance. Still others blame drug and device makers, government, the many providers of care and patients themselves.

Regardless of the root cause, cost is a critical issue, and organized medicine needs to take the lead on addressing it. We need to launch a collaborative and comprehensive effort to make care more affordable while at the same time striving to make Minnesota the healthiest state in the nation and the best place to practice medicine.

To do this, we need to fundamentally reorder our thinking.

First, we need to remember that health does not equal health care. Just doing more of our usual health care does not ensure that Minnesotans will have better health. Health, to most people, is best described in terms of functional capacity.

Second, we need to consider all drivers of cost including utilization and price. This may cause angst for physicians, for hospitals, for insurance companies, for home health care providers, and for device and drug companies. However, we are all part of the problem and we must all be part of the solution.

Third, we need to understand that the main determinants of health have less to do with the clinics and hospitals where most of us work and more to do with the communities where people live. Few of us understand how people's communities and behaviors affect their health. That needs

Given the complexity of the health care cost debate, no one group will be able to craft and implement a solution that will result in better health at an affordable price. Yet I maintain that physicians are in the best position to help us all understand how best to achieve health in a way that is affordable because we are responsible for so much of what is done in health care settings. This will involve the right combination of health care, community care (including education and social services), and payment and financing reform. The MMA can take a leadership role in making this happen, and we intend to do so.

Be part of the solution: If you have ideas and are interested in helping, please contact us at mma@mnmed.org.



Douglas Wood, MD MMA Board Chair

We need to consider all drivers of cost, including utilization and price.

A History of Innovation IN MINNESOTA



AROVF C. Walton Lillehei and team performing a controlled cross-circulation operation in the mid-1950s.

BY JOHNATHON M. AHO, MD, MATTHEW S. SCHAFF, MD, CORNELIUS A. THIELS, DO, MBA, ROBERT A. DARLING, MD, MARK N. PRICE KOERNER AND HARTZELL V. SCHAFF, MD

For centuries, the heart was believed to be an inoperable organ. Through the development of new technologies and techniques, the initial difficulties inherent with operating on a moving organ began to fade. But as surgeons in the last century pushed the boundaries of cardiac repair, new problems arose. To solve them, they enlisted the help of physiologists, residents and engineers. By taking a multidisciplinary approach, sharing information and ideas, and working collaboratively, University of Minnesota and Mayo Clinic investigators found themselves at the forefront of cardiac surgery. This article reviews Minnesota's contributions to the field.

"There, for a shining moment, the only institutions where one could go for open heart surgery were 90 miles apart, at the Mayo Clinic and the University of Minnesota."

- Norman Shumway, MD

n the mid-1900s, the University of Minnesota and Mayo Clinic were at the forefront of cardiac surgery. 1,2 Researchers from these two institutions developed techniques and devices that made heart surgery possible and spawned a medical device industry. The achievements of key individuals have long been recognized. This article suggests Minnesota's contributions to cardiac surgery were not only the result of efforts by individuals but also by teams of surgeons and surgical residents, physiologists and engineers working together.

THE EARLY YEARS

As surgery involving other organs advanced, Aristotle's conviction that the heart was inoperable prevailed and most surgeons viewed operating on the heart as taboo.3 That thinking was challenged to some extent in the early 19th century with the development of extracardiac procedures for treating penetrating thoracic injuries. Although cases of survival after surgery on the pericardium were documented as early as 1801,4 cardiac surgery at the end of the 19th century remained very limited. Austrian surgeon Theodor Billroth, who is considered the father of modern abdominal surgery, called it "an intervention which some surgeons would term a prostitution of the surgical act and other madness."5

During the first half of the 20th century, cardiac surgery was limited primarily to the management of traumatic injuries. Dwight Harken, MD, a World War II combat surgeon, discovered it was possible to make a small incision in a beating heart and insert a finger to locate and remove a bullet or fragment of shrapnel.6 The early successes of Harken and other combat surgeons as well as the development of extracardiac procedures such as closure of the patent ductus arteriosus in 1939, repair of an aortic coarctation in 1945 and development of the Blalock-Taussig shunt for treating cyanotic heart disease in the 1940s convinced surgeons that they could at least operate near the heart. Subsequently, they devised methods for repairing simple atrial septal defects (ASDs). One involved closing the defect beneath a pool of blood. However, because results were imprecise and repair of more complex intracardiac defects required direct visualization, they needed to find a way to stop blood flowing through the heart long enough to correct the problem while avoiding exsanguination.

THE BIRTH OF CARDIOPULMONARY BYPASS

In 1945, University of Minnesota chief of surgery Owen Wangensteen, MD, PhD, recognized this problem and suggested that surgical staff member Clarence Dennis, MD, PhD, consider developing a pump and oxygenator circuit that would support the body during cardiovascular surgical procedures.8

In 1947, Dennis, along with fellow surgeon Richard Varco, MD, PhD, began working on a machine to facilitate cardiopulmonary bypass. The team developed a cardiopulmonary support system that employed a series of discs rotating in an extracorporeal pool of venous blood to expose it to oxygen so gaseous exchange would take place.9 Their development was a massively complex machine that required 16 people to operate. The first clinical trials of the device were conducted in 1951.10 Unfortunately, because of inaccurate preoperative diagnoses and technician error, the first two patients to undergo surgery with the cardiopulmonary support system died.3 The system, however, was considered successful, as it proved that a patient's heart and lung function could be maintained during intracardiac surgery using mechanical support.11

Their experience with the device made researchers realize they needed to simplify the technology in order to minimize the chance of operator error.

Dennis and Varco's efforts to develop an oxygenator system were not the first. John Gibbon, MD, a surgeon at Jefferson Medical College in Philadelphia, had been working on a screen oxygenator system since 1937. He attempted to close a presumed ASD in a 1-year-old child using the cardiopulmonary bypass machine in 1952. Unfortunately, the preoperative diagnosis was incorrect (the patient in fact had a patent ductus arteriosus) and the



Richard DeWall operating his invention, the DeWall Bubble Oxygenator, for use during open heart surgery circa 1956.



Clarence Dennis and W. Harris showing operation of the heart-lung machine in 1951

patient died during the operation. Gibbon persevered and in 1953 successfully closed an ASD in an 18-year-old woman using his screen oxygenator device. Although this operation was successful, it was followed by five consecutive attempts at intracardiac repair that resulted in death. Discouraged, Gibbon ceased development of cardiopulmonary bypass and attempts at intracardiac surgery. 1,12,13

SPECIALIZED SUPPORT SYSTEMS

While Dennis and Varco were developing their heart-lung bypass machine, William Bigelow, MD, a Canadian surgeon who

trained at the University of Minnesota, was working on an alternative approach. He noticed that hibernating animals had drastically slower heart rates. He therefore began animal experiments with controlled hypothermia, demonstrating that the heart could be opened and operated on for approximately 10 minutes without permanent damage.14 A slowed heart rate and lowered metabolic demand provided a relatively stable platform for surgery.

In 1952, John Lewis, MD, PhD, and C. Walton Lillehei, MD, PhD, performed the first open-heart procedure using whole-body hypothermia.15 The patient, a 5-year-old girl born with an ASD, was cooled to 27°C (81°F) using a special blanket. As a result, her brain and other tissues required less oxygen, and her heart rate slowed enough so Lewis and Lillehei could repair the defect. Although it was considered groundbreaking, the hypothermic protocol only allowed surgeons to repair relatively simple defects that could be completed in 10 minutes or less.

To do more complex repairs, surgeons needed a more sophisticated method for maintaining physiologic homeostasis. Lillehei and Morley Cohen, MD, PhD, a surgical resident and investigator at the University of Minnesota who would eventually become an expert in the oxygenation of blood, began studying techniques that would provide surgeons with more time to perform intracardiac repairs. The first experiments used a dog's autologous pulmonary lobe as an organic oxygenator. Although the oxygenator was functional and successful overall, it was too delicate to be used clinically and edema formed

with higher flows or any obstruction to venous outflow.10

Given the limitations of early attempts at mechanical support, a University of Minnesota team that included Cohen, Lillehei and Herbert Warden, a colleague of Cohen's, came up with a simple solution: using a surrogate patient for cardiopulmonary support in a technique termed "controlled cross-circulation." The donor's and recipient's blood types were matched and major veins and arteries connected,

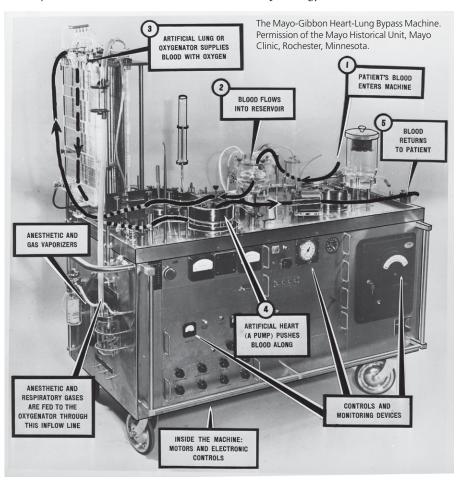
plicated pathology rather than failure of the support method.

During this time, surgeons achieved many "firsts" in lesion repairs including closure of ventricular septal defects, repair of atrioventricular canals and correction of Fallot's tetralogy. 2,19 In a series of groundbreaking operations, Lillehei demonstrated that intracardiac repairs were possible with this method. His team found that they were now limited by their understanding of the pathology and anatomical structure

group built on Gibbon's screen oxygenator design. The resulting machine was a complex device with an oxygenator consisting of 14 mesh screens. It also had several safety features including occluder mechanisms to maintain flow to the oxygenator as well as sensors for the arterial filter, pH control and venous reservoir volume. The cardiopulmonary bypass system required a large volume of blood (six units), which family members would either supply or pay for.21 The device was developed and tested over two years and eventually produced as the Mayo-Gibbon heart-lung bypass machine.²²

In 1955, the Mayo group planned a series of five operations using the cardiopulmonary bypass machine. Kirklin and colleagues performed an intracardiac procedure on a 5-year-old child with a ventricular septal defect (VSD) on March 22, 1955.^{23,24} This was the first successful operation using mechanical cardiopulmonary bypass since Gibbon's procedure in 1952. That first patient returned for a visit to Mayo Clinic 50 years later. With the success of the procedure, Kirklin's series of five patients became a series of eight. 1,25 In addition, operating the bypass machine, which originally required more than a dozen people, was simplified so it could be managed by a smaller team.

While Gibbon and Kirklin were developing a cardiopulmonary bypass machine using a screen oxygenator, Richard De-Wall, MD, a resident in the University of Minnesota's surgery department, began research on a bubble oxygenator for mechanical cardiopulmonary bypass. With this device, oxygen bubbles were passed through venous blood in an upright tube. The oxygenated blood then traveled down through a transverse debubbling chamber into the reservoir. The reservoir tube, 6 feet long and 1 inch in diameter, was coiled into a helix. The heavier, bubblefree blood would sink to the bottom of the tube, where it would be perfused back into the patient. This coil was simple and effective. Any blood still containing bubbles would sit on top of the arterialized blood in the helix and not enter the patient.²⁶ Between 1955 and 1957, 350 patients underwent open-heart surgery at the University of Minnesota using the bubble oxygenator.



bypassing the patient's heart. This allowed the surgical staff more time to repair complex intracardiac defects than was possible using the hypothermic approach. Following success with experimentation on dogs, Cohen, Lillehei, Varco and Warren began clinical application of cross-circulation in 1954. Between 1954 and 1955, 45 patients were operated on using this technique; 28 survived to discharge. 16-18 Deaths were attributed to the difficulty of the procedures and incomplete understanding of the comrather than technology. To further his surgical staff's understanding, Lillehei teamed up with a pathologist from Mayo Clinic, Jesse Edwards, MD. 20,21

Concurrently, John W. Kirklin, MD, of Mayo Clinic was assembling a team to develop a mechanical pump-oxygenator that would overcome the limitations and failures of the donor bypass process and mechanical bypass machines. He, too, assembled a multidisciplinary team that included physiologists, pathologists, cardiologists, anesthesiologists and mechanical engineers. Kirklin's

As a result of these revolutionary scientific and technical discoveries, heart surgery became routine.18

THE FIRST PACEMAKERS

Despite the success of mechanical systems for cardiopulmonary support, intracardiac repair was limited by inadequate knowledge of the cardiac conduction system and inability to correct bradycardia. When complete atrioventricular block developed, mortality was 100 percent. During a discussion of the problem of heart block at a conference, Jack Johnson, PhD, an investigator in the physiology department at the University of Minnesota, suggested using a Grass stimulator, which had been used in research on frog hearts, to temporarily pace the patient's heart.²⁷ The stimulator would emit a small electrical charge and stimulate muscle contractions, thereby overcoming major heart block. Soon after, Vincent Gott, MD, a surgical resident, tested the Grass stimulator on dogs. Although large and cumbersome, the device was effective. Following the canine experiments, Lillehei had a patient who developed complete heart block during an operation. He called Gott to the operating room and asked him to bring the Grass stimulator and electrodes. Together, they applied the electrodes and used electrical pacing to increase the patient's heart rate to normal. The woman did well and was discharged on isoproterenol for heart-rate augmentation.

The problem with the electrical pacing machine was the power source. The Grass stimulator was the size of a typewriter and needed to be plugged into a standard electrical outlet. A 100-yard extension cord was needed when moving a patient from the operating room to the intensive care unit. A power outage would result in death. Lillehei enlisted Earl Bakken, an electrical engineer, to develop a portable power supply to accompany the Grass stimulator. Knowing that he needed to produce a charge that was rhythmically consistent, Bakken used the circuit diagram for a metronome to produce what would become one of the most significant medical technology breakthroughs of the 20th century. The result of his work was

a small device with a power supply that could be strapped to the patient's body. It would send properly timed charges to stimulate the heart, thus overcoming complete heart block; the device was the first portable pacemaker. 13,27

This monumental achievement led Bakken and his brother-in-law to convert their medical equipment repair shop into a medical device company. In 1960, their company, Medtronic, developed the first implantable pacemaker, leading to the establishment of the biomedical technology industry in Minnesota.28

CONCLUSION

Breakthroughs in cardiac surgery were the result of cooperation among a number of medical and technology professionals in Minnesota. Always seeking to improve the quality of care and increase treatment options, these investigators demonstrated a commitment to incorporating creative ideas from their team members and other researchers. Their efforts led to incredible developments in medicine and spawned today's medical technology industry. MM

Johnathon Aho is a resident in general surgery at Mayo Clinic Rochester. Matthew Schaff is a resident in urology at Temple University in Philadelphia. Cornelius Thiels is a general surgery resident and surgical outcomes researcher at Mayo Clinic Rochester. Robert Darling is an otolaryngology resident at University of Texas Medical Branch. Mark Koerner is a student at University of Minnesota. Hartzell Schaff is a professor of surgery at Mayo Clinic Rochester.

REFERENCES

- 1. Daly RC, Dearani JA, McGregor CGA, et al. Fifty Years of Open Heart Surgery at the Mayo Clinic. Mayo Clin Proc. 2014;80(5):636-40.
- 2. Kirklin JW. The Tetralogy of Fallot from a Surgical Viewpoint. Philadelphia: Saunders; 1970
- 3. Miller GW. King of Hearts: The True Story of the Maverick Who Pioneered Open-Heart Surgery. New York. New York Times Books; 2000.
- 4. Alexi-Meskishvili V, Böttcher W. Suturing of penetrating wounds to the heart in the nineteenth century: the beginnings of heart surgery. Ann Thorac Surg. 2011;92(5):1926-31.
- 5. Jeger E. Die Chirurgie Der Blutgefasse Und Des Herzens. Berlin: August Hirschwald. 1913:295.
- 6. Birkbeck LH, Lorimer GN, Gray HM. Removal of a bullet from the right ventricle of the heart under local anaesthesia. Br Med J. 1915;2(2859):561-2.
- 7. Blalock A, Taussig HB. Landmark article May 19, 1945: The surgical treatment of malformations of the heart. JAMA.1984 Apr 27;251(16):2123-38.

- 8. National Library of Medicine. The Clarence Dennis Papers: Early Career and the Development of the Heart-Lung Machine, 1935-1951. Profiles Sci. 2013. Available at: http://profiles.nlm.nih.gov/ps/retrieve/ Narrative/BX/p-nid/343. Accessed July 9, 2014.
- 9. Dennis C, Spreng DS, Nelson GE, et al. Development of a pump-oxygenator to replace the heart and lungs; an apparatus applicable to human patients, and application to one case. Ann Surg. 1951;134(4):709-21.
- 10. DeWall R. Cardiovascular inventiveness within the University of Minnesota Department of Surgery. Ann Thorac Surg. 2005;79(6):S2214-6.
- 11. Gannon PG. Minnesota's Contribution to Open Heart Surgery. St. Paul, MN: Altheos Press; 2013.
- 12. Stoney WS. Pioneers of Cardiac Surgery. Nashville: Vanderbilt University Press, 2008.
- 13. Kouchoukos NT, Barcia A, Bargeron LM, Kirklin JW. Surgical treatment of congenital pulmonary atresia with ventricular septal defect. J Thorac Cardiovasc Surg. 1971;61(1):70-84.
- 14. Bigelow WG. Cold Hearts: The Story of Hypothermia and the Pacemaker in Heart Surgery. Toronto: McClelland and Stewart; 1984.
- 15. Tobbell DA. University of Minnesota Academic Health Center Oral History Project. Katherine Lillehei. 2010. Available at: http://blog.lib.umn.edu/ahc-ohp/ ahc-oral-history-project/2012/03/lillehei-katherine. html. Accessed November 24, 2014.
- 16 Lillehei CW Controlled cross circulation for directvision intracardiac surgery; correction of ventricular septal defects, atrioventricularis communis, and tetralogy of Fallot. Postgrad Med. 1955;17(5):388-96.
- 17. Cooley DA. A tribute to C. Walton Lillehei, the "Father of open heart surgery." Tex Heart Inst J. 1999;26(3):165-6.
- 18. Lillehei CW, Varco RL, Cohen M, Warden HE, Patton C, Moller JH. The first open-heart repairs of ventricular septal defect, atrioventricular communis, and tetralogy of Fallot using extracorporeal circulation by cross-circulation: a 30-year follow-up. Ann Thorac Surg. 1986;41(1):4-21.
- 19. Goor DA. The Genius of C. Walton Lillehei and the True History of Open Heart Surgery. New York: Vantage Press; 2007.
- 20. Angelini P. Jesse E. Edwards's Synopsis of Congenital Heart Disease. Texas Hear Inst J. 2000;27(4):418.
- 21. MHU-0670. Box 18; Folder 316. Staff Mem. 2014
- 22. MHU-0670. Box 16; Folder 295. Staff Mem. 2014.
- 23. Nelson CW. Mayo Roots: Profiling the Origins of Mayo Clinic. Rochester, MN.: Mayo Foundation for Medical Education and Research; 1990.
- 24. Dougherty M. The Spirit of Discovery: 50-year Anniversary of Cardiopulmonary Bypass at Mayo Clinic. Mayo Alumni Mag. 2005;41(4):2-4.
- 25. Kirklin JW, Dawson B, Devloo RA, Theye RA. Open intracardiac operations: use of circulatory arrest during hypothermia induced by blood cooling. Ann Surg. 1961;154:769-76.
- 26. DeWall RA. The evolution of the helical reservoir pump-oxygenator system at the University of Minnesota. Ann Thorac Surg. 2003;76(6):S2210-5.
- 27. Gott VL. Critical role of physiologist John A. Johnson in the origins of Minnesota's billion dollar pacemaker industry. Ann Thorac Surg. 2007;83(1):349-53.
- 28. Medtronic. Our History. Inventor of Pacemaker. 2014. Available at: www.medtronic.com/aboutus/company-profile/medtronic-history/index.htm. Accessed November 24, 2014.

Supportive living, Sustainable care

We need to rethink our approach to **caring for people with severe mental illnesses** if we are all to thrive.

BY KEVIN TURNOUIST, MD

ur deepest conflicts about the meaning of life are revealed in the way we treat people with severe mental illnesses. Do we view them as disposable humans who are not worthy of our care? Do we ignore the problems they pose for society? Do we hope they'll just go away? Do we continue to spend enormous amounts of money determining who deserves help and who will be told to sink or swim? Answering such questions is important, as the fate of the rest of us is intimately tied to that of people suffering with mental illnesses.

We're at a crucial point in the development of our culture. Ways of living that were relatively constant for hundreds of years changed dramatically toward the end of the last millennium. We must now decide how all of us will live in a hightech, fast-paced, interconnected world.

Mental health must be a priority

As we move into the future, we need to make the next generation's mental health a priority. We must strive to identify preventable causes of mental illnesses and provide enriched, abuse-free environments in which children can develop. And we need to find more humane, effective and efficient ways to care for people who



already suffer from mental illnesses. If we don't address these matters, we'll find ourselves in a world in which a shrinking group of functional people will be supporting an expanding population of people who are too anxious, depressed, entitled or psychotic to care for themselves.

To start, we need to honestly examine the attitudes and policies that have led to our current problems and try to adjust them. Our mental health system spends more than \$350,000 per person per year to keep people in costly regional treatment centers. Surveys repeatedly find that 40 percent or more could be discharged if only there were suitable placements for them in the community. Others bounce from hospitals to group homes to shelters to prisons, racking up exorbitant costs

along the way and never establishing a satisfactory quality of life or any semblance of stability.

Our focus should be on creating supportive living environments that provide the things people really need in order to thrive—opportunities, incentives, consequences, employment, stimulating activities, caring relationships and a place to call home. Many people with mental illness cannot provide these things for themselves. And it's far more expensive to leave such needs unmet than to address them thoughtfully and systematically.

One residential model to consider is Touchstone Mental Health's. Its Rising Cedars facility opened in July of 2013 in the Seward neighborhood of Minneapolis. It's a lovely, state-of-the-art building that provides 40 residents with individual apartments and a host of supportive services. Residents can prepare their own meals or dine in the cafeteria. They have access to an exercise room and a fitness coach. Nutrition services, holistic health assessments and primary medical care are available on-site as are acupuncture, healing touch, help with medications, therapy groups and a rich array of activities. Staff are available 24/7 and services are tailored to individuals' needs. As a result, hospitalizations are rarely necessary.

This approach is by no means cheap. The average cost to house a person at Rising Cedars is approximately \$4,500 per month. But when we compared that with the costs the first 22 residents incurred during the year before they moved in, we found the net savings for psychiatric care alone amounted to \$2.3 million.

Our experiment in supportive housing is reinforcing a point some of us have been making for years: It is much cheaper to provide safe, dignified, supportive residences for people with mental illnesses than it is to pick up the pieces when such options aren't available.

Anyone familiar with the ongoing woes of our state's mental health system knows that the shortage of decent supportive living environments is a major driver of its mounting costs. The Legislature, in response to lawsuits, has tried to mandate that changes be made in the way our mentally ill citizens are cared for, but progress has been almost nonexistent. And nothing will change until funds are appropriated so



Our focus should be on

creating supportive living environments that provide the things people really need in order to thrive.

we can address our housing shortage on a larger scale.

Rising Cedars is a wonderful model, but it is not for everyone. A whole spectrum of housing options is needed, from small single residences that offer supports to facilities with highly structured programs that can safely house sex offenders or people with mental illnesses and other complex medical problems. There is room for all sorts of creative ideas.

Moving ahead

A hallmark of the disordered mind is the tendency to keep approaching a problem in the same way, even when that approach clearly isn't working. Healthy people and organizations can step back, make realistic assessments of a situation and try new strategies when the old ones prove inadequate.

It should be clear by now that our very costly system of public mental health care cannot be maintained in its present form. We simply cannot afford to continue with business as usual. Lives are at stake—millions of them. We should never lose sight of that fact. MM

Kevin Turnquist is a psychiatrist employed by the Minnesota Department of Human Services and Touchstone Mental Health.

Meet your unique financing needs with our Doctor Loan

If you are a medical resident or licensed, practicing doctor, dentist or other eligible medical professional, the Bank of America Home Loans® Doctor Loan could help you make the move to your next home.¹ Advantages including:².

- As little as 5% down on mortgages up to \$850,000
- Employment start date up to 60 days after closing allowed
- Student loan debt not included in total debt calculation
- A range of fixed- and adjustable-rate loans

Contact me to learn more.



Daniel Mills
Mortgage Loan Officer
NMLS ID: 421409
651.334.9589 Cell
dmills@bankofamerica.com
mortgage.bankofamerica.com/dmills

¹An applicant must have, or open prior to loan closing, a banking relationship with Bank of America, which can be, at a minimum, a checking or savings account. ²Restrictions apply. Ask for details.



Credit and collateral are subject to approval. Terms and conditions apply. This is not a commitment to lend. Programs, rates, terms and conditions are subject to change without notice. Bank of America, N.A., Member FDIC. 2 Equal Housing Lender. ©2013 Bank of America Corporation. 00-62-2358D 08-2013 ARN9HAN3

How Should Doctors Disclose Conflicts of Interest to Patients?

A Focus Group Investigation

BY J. MICHAEL OAKES, PHD, HILARY K. WHITHAM, MPH, ALICEN BURNS SPAULDING, PHD, LYNN A. ZENTNER, JD, AND SETH R. BECCARD, JD

Disclosure is often proposed as a strategy for handling financial conflicts of interest in medicine. Yet there has been no guidance on how clinicians should disclose potential conflicts of interest to patients. To discern patients' attitudes toward conflicts of interest in medicine and their opinions about how physicians should disclose possible conflicts in the clinical setting, we conducted six focus groups with patients recruited from three clinics in the Twin Cities area. Investigators reviewed audio recordings of the focus group discussions independently and identified themes. Maintaining patient-doctor trust was critical to all study participants. Most wanted to know only about conflicts of interest that were directly relevant to their care. In addition, most participants said physicians and other health care providers should offer patients an easy-to-read document about any conflict of interest during clinic check-ins and bring up the subject when discussing specific treatment plans for which the conflict of interest is relevant. Our study offers the first insights into patient attitudes toward and opinions about disclosure practices in clinical settings. More research into the practical aspects of managing conflicts of interest is needed as ineffective disclosure may undermine patients' trust in their doctors.

great deal of attention recently has been paid to the effect of financial conflicts of interest in clinical research and practice. Scholars and practitioners have grappled with issues ranging from the ghost-writing of scientific papers to the receipt of branded ink pens. And they have questioned what patients and/ or clinical research subjects should know about their doctors' relationships with drug companies and industry. 1,2 A 2009 Institute of Medicine (IOM) report, which

offered a comprehensive review of the central issues, pointed out that conflict of interest matters not only because it may influence or affect patient care but also because it may alter biomedical research and erode the public's trust in physicians and the health care system.3

Disclosure has often been seen as a key strategy for mitigating the negative impact of conflicts of interest. The basic idea is that if physicians or researchers are transparent about potential conflicts of interest, stakeholders (peers, students, journals, patients and potential research subjects) should be able to make more sound, au-

tonomous decisions about moving forward with care, research or related activities.4 But physicians do not fully understand how to disclose information well. Consequently, patients and research subjects may lack the knowledge and perspective they need to assess a situation or seek care from another physician if they have concerns.3,5 In addition, some research suggests that disclosure produces misunderstanding and unnecessary anxiety.6 Nevertheless, withholding information about possible

conflicts of interest can be interpreted as being morally wrong,⁴ and evidence shows that patients and potential research subjects prefer that information about conflicts of interest be disclosed.7-10

Policymakers have tried to address conflict of interest in both the research and clinical setting. The Food and Drug Administration and the Public Health Service each have disclosure policies. In 2010, Congress passed the Physician Payments Sunshine Act, which requires manufacturers of drugs and medical devices to disclose payments made to physicians and teaching hospitals. Professional associations are similarly engaged. The Association of American Medical Colleges issued a comprehensive report in 2010 urging teaching hospitals to establish policies to manage financial relationships between physicians and industry to ensure that those relationships do not adversely affect patient care.11 The authors noted, "... the research suggests that the research participant and the patient are interested in being informed of financial interests, which is consistent with the patient's right to know as a value."

Although an increasing number of institutions now have disclosure policies for those providing clinical care, there is no consensus on how to disclose conflicts of interest. In the context of clinical research, disclosure often occurs during the informed-consent process, especially after patients' misconceptions about therapies have been addressed.¹² However, much else about how to disclose conflicts of interest to patients remains unknown. Should the clinician send a letter explaining his or her potential conflict of interest? If so, should the letter be sent before or after a clinical visit? Should the discussion take place during the clinical visit? If so, when and where? Should a clinic post conflicts of interest on its website?

Answering such questions is critical for those who develop policies and practices for their institutions. It is also critical for

physicians who need to comply with those policies without needlessly alarming patients. Importantly, ineffective disclosure of conflict of interest in clinical settings may undermine the very trust patients have in their physicians.

The Study

We set out to take a first step toward understanding how patients want to learn about their physicians' conflicts of interest with the underlying goal of informing the development of optimal disclosure policies and practices. This study was motivated by difficult discussions regarding disclosure requirements in an academic health center.

Methodology

Following Weinfurt and colleagues' early work on conflict of interest in research settings,8 we used focus groups to gather our data. Focus groups capitalize on group dynamics so that researchers can quickly collect data on emerging or complex phenomena.13 This approach often serves as a prelude to, if not a springboard for, more systematic study.

In an effort to gather information from a diverse pool of patients, participants were recruited from three of the academic health center's clinics (orthopedic surgery, cardiology and dentistry). We worked with clinic administrators who had the front-desk staff hand out recruitment flyers to visiting patients. Those who were interested contacted the researchers directly. The only exclusion criteria was being younger than 18 years of age. Recruitment from the cardiology clinic proved difficult, as most of the patients were quite ill and unable to participate. As a result, we oversampled from the orthopedic surgery and dentistry clinics.

Recruitment materials indicated that the study was about conflict of interest in medicine. The ultimate purpose of the study was not revealed until after each focus group concluded. This was done to minimize the potential for bias in the selection of subjects or their responses. Participants were asked what they thought the study was about before the start of each

focus group session. No one mentioned disclosure procedures.

Over a nine-week period, a total of six focus groups were held on campus. Healthy snacks and beverages, free parking and a \$40 gift card were offered to each participant. Five out of the six focus groups were led by the same facilitator. Both focus-group leaders had years of experience with the methodology. All meetings were recorded. Recordings were independently reviewed by three of the study's investigators.

Participants were asked these questions: 1) What is a conflict of interest and when does a doctor have one? 2) Have you ever been notified by a doctor that he or she has a conflict of interest? 3) If your doctor has a conflict of interest, how would you like to be notified? Before the focus groups began, participants were asked to provide demographic information. The response rate was 100%, with no missing data.

This study was approved by our university's institutional review board for the protection of human research subjects, and informed consent was obtained prior to data collection.

Thirty-one persons participated (18, 10 and three from the orthopedic surgery, dentistry and cardiology clinics, respectively). The mean age of participants was 55 years; the youngest was 20, the oldest was 80. Twenty-six percent were male. The participants overwhelmingly selfidentified as white (race/ethnicity), and 65% indicated they had completed college. It appeared the participants were quite diverse in background and world view. For example, both a college student and a selfidentified new immigrant participated. One participant reported having had a long career in medical technology and another self-identified as a lawyer. There was variation in the degree to which focus group participants had interfaced with the health care system, but most had considerable experience with it.



Although there was variation of opinion within focus groups, there was little variation in collective opinion across focus groups. In other words, major themes were consistent across the focus groups.

Findings

At the start, many of the participants stated they knew what a conflict of interest was; but our assessment was that only two had a deep understanding of the issues the lawyer and the medical technology professional. Three participants stated they had been told by a physician about a conflict of interest; those disclosures had been made in person and in an orthopedic setting. The disclosures were described as uneventful and not having had an impact on the care provided or the patient-provider relationship.

The focus group participants did not dwell on conflict of interest disclosure requirements. But during the discussions, one participant said she was certain that a federal law required physicians to disclose any and all conflicts of interest (an incorrect belief that was corrected after the group ended). In terms of clinic requirements, the participant went on to state, "I am absolutely sure that [my doctor's] practice already requires disclosure ... the doctor would not want his professional judgment tainted ... [the disclosure] is already out there."

A few participants expressed concern about the topic itself. Their feeling was that physicians and other health care providers always acted in the patient's best interest. It seemed they could not imagine how a conflict of interest might affect patient care. When discussing the issue, one participant stated, "I don't want to talk down to my doctor ... or degrade his profession." Another said, "I work under the assumption

that every physician that takes care of you is doing the best they can."

And another participant said, "Just because [my doctor] does well [financially] does not entitle me to know." Further, several participants thought having a doctor with a financial interest in a new technology was a good thing because it indicated the physician was on the cutting edge of medicine.

On the other hand, most expressed cynical views about the link between conflict of interest and physician behavior. When the focus group leader pushed the issue of whether or not disclosure demeans a physician, one participant responded: "No, it's all about money now." There was almost complete agreement with this statement and similar ones across the focus groups.

The issue of trust was critical to all participants. One said, "If I trust the doctor, the conflict is not a big deal." There was near unanimous agreement that when clinicians did not voluntarily disclose a conflict of interest when one existed, they put their relationships with patients in jeopardy. When discussing the issue of not disclosing a potential conflict of interest, one participant stated that even if the doctor was his long-time physician, he would wonder, "What else didn't he tell me?"

With respect to disclosure procedures, participants' opinions varied. In fact, one participant—a new immigrant to the United States—did not want his physician to be forced to disclose a conflict of interest at all because he feared the doctor might then not provide optimal care. None of the participants thought clinics should post their doctors' conflicts of interest on clinic websites or on placards or signs. They did not think such communications were effective, and most thought they would confuse patients. One participant stated, "I'm not going on the website if I am sick." Another said that a sign would be viewed as an advertisement.

Only a few of the participants liked the idea of receiving a letter at home regarding a conflict of interest. Several agreed with the sentiment expressed by one participant who said, "I hate stuff coming in the mail." Further, there was substantial discussion about whether such a letter should be sent before or after a clinical visit. And there was discussion about what should be included in such a letter. Ultimately, the idea of a mailed letter was not well-received.

Most participants, though, did think that conflict-of-interest disclosures should include a paper document. The idea was to provide the document disclosing the relevant conflict of interest during checkin. Most participants thought disclosure forms should be delivered like HIPAA forms and previsit screening surveys. Desk staff would hand out the disclosure form and be prepared to answer basic questions. One reason participants preferred a paper disclosure was because of the stress of clinic visits. Although participants generally felt empowered to ask questions during a clinic visit, they wanted a document they could examine afterward. One participant said: "I want a piece of paper that I can see ... so I can ask the doctor if Ihave questions."

All focus group participants wanted the information presented in a simple-to-read format, perhaps using bullet points. A key point was that the disclosure form should list contact information for persons with knowledge of the issues so that patients could follow up if they wished. As is done on informed consent forms used in clinical research, listing an "out of study" contact such as a conflict of interest regulatory director was viewed as being necessary.

By far, the opinion most frequently expressed was that a physician should disclose a potential conflict of interest to a patient during any office visit specifically focused on a treatment for which the disclosure is relevant. This approach was viewed as acceptable even to those who

preferred other methods. Participants expressed a desire to hear their physician describe and explain any and all relevant conflicts.

The primary concern with verbal disclosure was that discussion about conflict of interest would distract from patient care and/or use up valuable visit time. None of the participants wanted their physician to waste time or be distracted from clinical care if the conflict of interest was not directly relevant to a specific aspect of their treatment (eg, a particular device or pharmaceutical). One participant summarized the point with the rhetorical question: "What does your conflict have to do with me?" Still, the vast majority of participants seemed to agree with the sentiment in the following quote: "The extra few minutes to convey [a conflict of interest] is so worth it ... it's much more human and ensures trust." Despite consensus that disclosures ought to be made in person, several participants worried about the implications of instituting systemwide policies. The following quote illustrates their concern: "If your doctor is taking 45 minutes to discuss his stock portfolio, then the cost of health care is going to go up."

Conclusions and Recommendations

Conflicts of interest in health care may not necessarily be a bad thing. Entrepreneurial clinician-scientists need to break new ground and develop life-enhancing therapies and care models. The concern is to maintain both the patient's and the public's trust in clinical care and research.

Disclosure is often considered the paramount strategy for ensuring that trust is maintained. Previous studies have established the importance of disclosure in clinical research and practice; but until now the practical aspects of how to disclose conflicts of interest have not been empirically addressed. This study aimed to start the dialogue on disclosure procedures in the clinical setting.

Although participants' understanding of the issues and recommendations varied, they universally stressed the importance of having trust in their doctor and in having a strong doctor-patient relationship.

The following are the two specific recommendations that emerged from our research on how disclosures should be made: 1) Give patients an up-to-date, easy-toread paper document about the conflict of interest; 2) When discussing specific treatment plans for which a conflict is relevant (eg, a drug or device), take the time to discuss the conflict with the patient and offer an assessment of alternatives.

Legal and institutional concerns may need to override patient preferences as an organization develops its conflict of interest disclosure policy and practices. But in an era of patient-centered care, it seems appropriate to consider how patients prefer to learn about conflicts of interest, especially if an underlying intent of disclosure is to assist patients in making informed decisions about their care.

This research should be viewed as preliminary, if not a foundation for more rigorous future studies. Obvious limitations include its small sample size and the fact that participants were recruited from just three clinics in one academic health center. Clearly, more research into the practical aspects of conflict of interest management is needed as ineffective disclosure can negatively affect patient care and the patient-clinician relationship. MM

J. Michael Oakes is an associate professor in the division of epidemiology and co-director of the U.S. Census Research Data Center at the University of Minnesota. He is an IRB chair and vice-chair of the University's Conflict of Interest Committee. Hilary Whitham is a doctoral student in the Division of Epidemiology at the University of Minnesota. Alicen Spaulding is a presidential management fellow at the National Institutes of Health.* Lynn Zentner is the director of the Office of Institutional Compliance at the University of Minnesota. Seth Beccard is an associate administrator in the Conflict of Interest Program at the University of Minnesota.

*This article was prepared while Alicen Spaulding was employed at the University of Minnesota. The opinions expressed in this article are the authors' own and do not reflect the view of the National Institutes of Health. the Department of Health and Human Services or the United States Government.

REFERENCES

- 1. Angell M. The truth about the drug companies: how they deceive us and what to do about it. Random House Digital, Inc.; 2005.
- 2. Kassirer IP On the Take: How Medicine's Complicity with Big Business Can Endanger your Yealth. Oxford University Press New York; 2005.
- 3. Lo B, Field MJ. Conflict of Interest in Medical Research, Education, and Practice. National Academies Press; 2009. Available at: www.iom. edu/Reports/2009/Conflict-of-Interest-in-Medical-Research-Education-and-Practice.aspx. Accessed October 28, 2014.
- 4. Weinfurt KP, Hall MA, King NM, Friedman JY, Schulman KA, Sugarman J. Disclosure of financial relationships to participants in clinical research. New England Journal of Medicine. 2009;361(9):916-21.
- 5. Sah S, Loewenstein G, Cain D. How Doctors Disclosures Increase Patient Anxiety. Social Science Research Network (SSRN) 1970961. 2011.
- 6. Loewenstein G, Sah S, Cain DM. The unintended consequences of conflict of interest disclosure. JAMA. 2012;307(7):669-70
- 7. Kim S, Millard R, Nisbet P, Cox C, Caine E. Potential research participants' views regarding researcher and institutional financial conflicts of interest. J Med Ethics. 2004;30(1):73-9.
- 8. Weinfurt KP, Friedman JY, Allsbrook JS, Dinan MA, Hall MA, Sugarman J. Views of potential research participants on financial conflicts of interest: barriers and opportunities for effective disclosure. J Gen Intern Med. 2006;21(9):901-6.
- 9. Weinfurt KP, Friedman JY, Dinan MA, et al. Disclosing conflicts of interest in clinical research: views of institutional review boards, conflict of interest committees, and investigators. J Law, Med Ethics. 2006;34(3):581-91.
- 10. Lieberman JR, Pensak MJ, Kelleher MS, Polkowski II GG. Disclosure of financial conflicts of interest: an evaluation of orthopaedic surgery patients' understanding. Clin Orthop Relat Res. 2013;471(2):472-7.
- 11. AAMC. Implementing the Final Rule on Financial Conflicts of Interest in Public Health Service Funded Research AAMC: 2012
- 12. Appelbaum PS, Lidz CW, Grisso T. Therapeutic misconception in clinical research: frequency and risk factors. IRB. 2004;26(2):1-8.
- 13. Krueger RA. Focus groups: A Practical Guide for Applied Research. Sage; 2009.

Why MNsure Matters to Physicians

MNsure, the state's health insurance exchange, has helped expand insurance coverage in Minnesota since it began operating in October 2013. To be price-competitive, many insurers developed products with more limited provider networks than those generally available before MNsure's launch. In some states, this network design strategy has led to concerns about limited access to services and prompted action on the part of physicians and lawmakers. Minnesota physicians need to be aware of changes in network design in order to support access to care for their patients.

BY JANET SILVERSMITH

ealth insurance exchanges are a core feature of the Affordable Care Act (ACA). Designed to simplify and standardize insurance purchasing, they have been the focus of intense political and media attention. MNsure, Minnesota's health insurance exchange, has had plenty of challenges. Website problems, long wait times, leadership upheavals and critical state audits are among the difficulties MNsure experienced during its first year of operation. Much of the media coverage of MNsure has focused on technical operations, insurer participation and premium rates. Physicians may be more interested in another aspect, however: the provider networks in the policies offered on the exchange. With the second round of open enrollment currently in progress (through February 15, 2015), it is worth examining this issue.

Network Regulation

Prior to passage of the ACA, only health maintenance organizations (HMOs) were regulated in Minnesota with regard to provider networks. Preferred provider organizations (PPOs), which also use provider networks, were not. Whereas

they generally provide higher benefits for services delivered by in-network providers and lower benefits for services delivered by out-of-network providers, HMOs generally exclude from coverage care that is provided by out-of-network providers. Thus, the adequacy of HMO networks was of significant interest to Minnesota policy makers looking to ensure reasonable access to care for HMO enrollees.

Among the ACA's requirements for insurance products sold on health insurance exchanges, known as qualified health plans (QHPs), are that they maintain a network 1) that is sufficient in the number and types of provider to ensure that all services, including care for mental health and substance abuse issues, will be available without unreasonable delay; and 2) that they include a sufficient number of essential community providers* that are sufficiently distributed geographically to ensure reasonable and timely access to care for low-income, medically underserved in-

dividuals in a QHP's service area. With no further federal guidance, states were left to implement the QHP network standards and ensure compliance.

As part of its authorization of MNsure, the 2013 Legislature established explicit policy intended to "ensure fair competition for all health carriers in Minnesota, to minimize adverse selection, and to ensure that health plans are offered in a manner that protects consumers and promotes the provision of high-quality affordable health care and improved health outcomes."2 This policy created a common set of rules for all individual and small-group insurance products, whether or not they were sold on MNsure. Among those rules was a provider network adequacy provision that would apply to more than HMOs and include "all health carriers that either require an enrollee to use or that create incentives, including financial incentives, for an enrollee to use providers that are managed, owned, under contract with, or employed by the health carrier."3

Borrowing from the previous network requirements for HMOs, the Legislature created geographic standards for health plan networks. In addition to the ACA's

^{*} In Minnesota, the Department of Health designates essential community providers. They are generally organizations that are nonprofit, use a sliding fee schedule to charge for services, and have a demonstrated ability to serve high-risk populations, those with special needs and the underserved.

requirements, the state guidelines required the following of networks:

- It is less than 30 miles or 30 minutes to the nearest provider of primary care services, mental health services and general hospital services;4
- It is less than 60 miles or 60 minutes to the nearest provider of specialty physician services, ancillary services, specialized hospital services and all other health services.5

To further guide the health department's review of network adequacy, the Legislature noted the following:

- Primary care physician services must be available and accessible 24 hours per day, seven days per week, within the network area:
- The network must have a sufficient number of primary care physicians who have hospital admitting privileges at one or more participating hospitals within the network area so that necessary admissions are made on a timely basis;
- Specialty physician services must be available through the network or contract arrangement;
- Mental health and substance use disorder treatment providers must be available and accessible through the network or contract arrangement;
- Non-physician primary care providers must be available and accessible, to the extent permitted under state scope of practice law;
- The network must have available (or through arrangements) appropriate and sufficient personnel, physical resources and equipment to meet the projected needs of enrollees for covered health care services.6

Networks are also required to offer a contract to any essential community providers within the service area.7

The Legislature's standards for network adequacy include a provision allowing insurers to apply for a waiver of the geographic standards. A waiver for up to four years can be granted if complying with the 30 minutes/miles and 60 minutes/miles standards is not feasible in a particular service area.8 According to the Department of Health, it is not uncommon to

authorize waivers because of limited availability of specialty physicians in certain geographic areas.9

MNsure's Role

The launch of MNsure in October 2013 signaled a fundamental shift in how Minnesota insurers sell products and compete for business. With the ACA's 2014 mandate for coverage and the federal tax credits that are only available to eligible individuals and small employers who purchase insurance through MNsure, insurers have a new and compelling reason to compete for a likely growing market of motivated buyers. Data from 2014 show approximately 371,000 individuals and families obtained coverage through MNsure last year, with nearly 56,000 purchasing a qualified health plan (QHP). 100 Use by small employers was quite limited: Fewer than 200 employers (approximately 1,500 employees and dependents) signed up for coverage through the exchange.11

Although the number of MNsure users is relatively small (generally those purchasing individual coverage), use of the exchange is projected to grow. One factor that may contribute to that growth is an ACA financing mechanism referred to as the "Cadillac" tax, a 40% excise tax that will be assessed starting in 2018 on high-cost/benefit-rich health plans. In anticipation, many employers are already beginning to modify coverage levels to avoid the tax.12 If projected revenue from the Cadillac tax does not materialize, there may be a need to identify alternate revenue sources. One option that has generated interest is eliminating the health insurance tax deduction for employers. Some have theorized that if the employer health insurance deduction is eliminated, employers will stop purchasing coverage and, instead, provide funds directly to employees to purchase insurance on their own.13 Such a move could result in a huge influx of new purchasers to the exchanges.

Networks in Individual Insurance Offerings on MNsure, 2015

Blue Cross and Blue Shield of Minnesota

Aware Consumer Value Allina Sanford Health Network

Blue Plus

Allina Health Network Sanford Health Network

HealthPartners

Key individual network

Medica

Applause Individual Choice Inspiration HealthEast Medica with Mayo Clinic North Memorial Acclaim

UCare

UCare Choices UCare Fairview Choices

Prior to passage of the ACA, insurers had a variety of mechanisms for designing price-competitive policies, from limiting or excluding certain benefits to employing complex cost-sharing options. In a move aimed at improving coverage and making it easier to compare products, the ACA eliminated some of those options by establishing new standards for cost sharing (bronze, silver, gold and platinum benefit levels) and creating a set of essential health benefits that must be included in all plans. As a result, many insurers have moved toward limiting or narrowing their provider networks as a way to create less expensive products. This strategy was employed widely in the mid-1990s but fell out of favor as individuals and employers resisted limits on choice.

MNsure's Products

Products sold on MNsure are designated as either individual or small-employer policies. For 2015, five insurers (Blue

[†] The remaining individuals were found to be eligible for Medical Assistance (235,000) or MinnesotaCare

Cross and Blue Shield of Minnesota, Blue Plus, HealthPartners, Medica and UCare) are selling 84 different individual products. Three insurers (Blue Cross and Blue Shield of Minnesota, Blue Plus and Medica) are offering an additional 58 small-employer products.14

A general review of QHPs sold on MNsure in 2014 indicates variation in network breadth among the five health plans offering products (Blue Cross and Blue Shield, PreferredOne, HealthPartners, Medica, UCare). The smallest network was the Medica North Memorial Acclaim Network, which included only 22 clinics-all of which were North clinics or Buffalo clinics. The insurance product associated with this network was only available in Anoka County.

The 84 individual products available in 2015 use 14 different health care provider networks, with Medica offering the most (five networks) among its 40 products (Table). By contrast, HealthPartners has just one network for its 11 products. Several networks are designed to support accountable care-type models; in those cases, many—if not most—of the providers belong to a specific health system. It is still too early to know if products with limited provider networks will prove to be popular choices. That said, concerns about limited networks have been raised throughout the country.

Backlash against Narrow Networks

In response to both consumer and physician complaints about extremely narrow QHP networks in Texas, New Hampshire, California and other states, the Centers for Medicare and Medicaid Services (CMS) tightened requirements and network review processes for products offered on the federal exchange for 2015. CMS also signaled that it may further develop time, distance or other standards for future network review.15

Minnesota's network standards remain more explicit than the federal standards and are unlikely to be affected if CMS takes further action. Reaction in Minnesota to network design was most pronounced when the original plan choices for 2014 were announced and only one product from Blue Cross and Blue Shield was offered to residents of Rochester. Subsequent efforts to increase the number of choices resulted in more Medica plans being offered; however, none of them included the Mayo Clinic in their provider networks.

Concern about narrow networks has prompted grassroots reactions. South Dakota, for example, passed an any willing provider ballot initiative this past November that was initiated by three physicians motivated to preserve broad patient choice of physicians and other providers. 16 The law will allow any health care provider to join an insurance company's network, assuming the provider is willing, qualified and meets the conditions of participation established by the insurer.

Whether others will take similar actions against narrow networks remains to be seen. Protests against narrow managed care networks were common in the mid-1990s. National polling data suggest that many patients dislike narrow networks. A Kaiser Health Tracking poll conducted in February 2014 found that 51% of Americans surveyed would rather have a plan that costs more money but allows them to see a broader range of doctors and hospitals, while 37% prefer a plan that is less expensive but provides access to a more limited range of providers.¹⁷ But those who are either currently uninsured or purchase their own coverage, said they would prefer less-costly plans with narrow networks over more expensive plans with broader networks by a 54% to 35% margin.¹⁷

Conclusion

The era of broad, all-inclusive provider networks appears to be waning as MNsure and related reform efforts have prompted greater price competition among insurers. Physician practices will want to pay even greater attention to their insurance contracts and understand the scope of the networks in which they are included to make sure their patients have ongoing access to care. MM

Janet Silversmith is the MMA's director of health policy.

REFERENCES

- 1. Code of Federal Regulations, Title 45, Part 156, Section 230(a).
- 2. Minn. Statute 62K.02, Subd. 1.
- 3. Minn. Statute 62K.10, Subd. 1
- 4. Minn Statute 62K.10, Subd. 2.
- 5. Minn Statute 62K.10, Subd. 3.
- 6. Minn Statute 62K.10, Subd 4 (1-6).
- 7. Minn Statute 62K.10, Subd. 7.
- 8. Minn Statute 62K, Subd 5.
- 9. Personal communication with Tom Major and Diane Konecny, Minnesota Department of Health, November 18, 2014.
- 10. MNsure Metrics Dashboard, data as of November 11, 2014. Presented to November 19, 2014 MNSure Board of Directors meeting.
- 11. Blewett L, Lukanen E. Early Impact of the ACA on Health Insurance Coverage in Minnesota, State Health Access Data Assistance Center (SHADAC), University of Minnesota. Presentation to MNsure Board of Directors, June 18, 2014.
- 12. Health Policy Brief: "Excise Tax on 'Cadillac' Plans," Health Affairs, September 12, 2013.
- 13. Mark Bertolini, Chairman, CEO and President, of Aetna. Presentation at Mayo Clinic Center for Innovation, Transform 2014 Conference, September 7-9, 2014
- 14. Minnesota Department of Commerce.
- 15. 2015 Letter to Issuers in the Federally-facilitated Marketplaces. Baltimore: Centers for Medicare and Medicaid Services, Center for Consumer Information and Insurance Oversight, 2014. Available at: http:// www.cms.gov/CCIIO/Resources/Regulations-and-Guidance/Downloads/draft-issuer-letter-2-4-2014.pdf Accessed December 11, 2014.
- 16. Letter from Office of Attorney General of South Dakota Marty Jackley to Secretary of State Jason Gant, Health Care Provider Initiated Measure, August 12, 2013.
- 17. Kaiser Health Tracking Poll: February 2014. Feb 26, 2014. Accessed online at http://kff.org/ health-reform/poll-finding/kaiser-health-tracking-pollfebruary-2014/.

Turning the Tide against AIDS by Preventing New HIV Infections

Initial Experience with Minnesota's First PrEP Clinic

BY CAITLIN ECCLES-RADTKE, MD, AND KEITH HENRY, MD

During the last 30 years, there have been remarkable improvements in the treatment of patients with HIV. New drug regimens are both tolerable and easy to take, resulting in HIV viral suppression and markedly improved clinical outcomes. Viral suppression in patients with HIV significantly decreases the chance they will transmit the virus. Yet HIV transmission levels in the United States remain unacceptably high. Prevention efforts focused on HIV-negative persons who are at high risk for infection have led to the development of a pre-exposure prophylaxis (PrEP) strategy. This article provides an overview of PrEP and a review of the evidence for it, barriers to its use and how PrEP is being used in the United States and Minnesota. With concerted efforts by physicians, patients and public health authorities, PrEP could become a major tool in preventing transmission of the HIV virus.

hen AIDS was first recognized in the early 1980s, it was considered a terminal illness. Over the last 30-plus years, that has changed. Infection with the human immunodeficiency virus (HIV), the causative agent, can now be viewed as a chronic disease thanks to the development of anti-retroviral therapy (ART). Today, patients with HIV have a projected lifespan approaching that of patients without HIV, resulting in a shift in morbidity and mortality to other diseases including cancer, stroke and heart disease. Further, the HPTN052 study, which was named the 2011 breakthrough of the year by Science, demonstrated that HIVinfected persons who began using ART when their immune systems were relatively healthy (as opposed to starting use after the disease has advanced) were 96% less likely to transmit the virus to a sexual partner.1

Despite these major advances, we have not yet succeeded in controlling the epidemic, although there have been some areas of success. The estimated number of new HIV infections per year in the United States decreased from 56,715 in 2002 to 41,720 in 2011,2 and there has been a significant decrease in new infections among IV drug users and heterosexuals. However, there has been no decrease among men who have sex with men (MSM). Particularly striking was the 32% increase in estimated new cases among younger MSM (those ages 13 to 25 years).²

For many viral infections, development of a vaccine has been the key to halting or preventing epidemics. But an effective HIV vaccine has proved elusive. Other approaches to prevention, including recommendations for abstinence from unsafe sex, condom use, male circumcision and needle exchange programs, have failed to decrease the number of new infections

among MSM in the United States over the last decade.

Recently, the HIV field has taken a "cascade" approach to prevention that begins with identifying those in a population who are HIV-infected and culminates with getting them care and on ART with suppressed viral levels. Testing is focused on people between the ages of 13 and 64 years in addition to younger adolescents and older adults who are at increased risk for HIV. 3,4 Currently, approximately one in five people with HIV in the United States are unaware of their infection.

If "test and treat" were successfully implemented, transmission to uninfected persons would decline significantly, essentially halting the epidemic. Unfortunately, this approach has not been as effective as we would have expected. Less than 30% of all HIV-positive individuals in the United States have an undetectable viral load either because of health care system failures

TABLE 1

Summary of Pre-exposure Prophylaxis Studies and Rates of HIV Prevention as Compared with Placebo

STUDY	POPULATION	HIV PREVENTION RATE	ROUTE/STUDY DRUG
iPrex	Men who have sex with men	44%	PO daily Truvada
TDF2	Heterosexual men and women	62%	PO daily Truvada
PartnersPREP	HIV sero-discordant couples	67%	PO daily tenofovir
		75%	PO daily Truvada
FemPREP	Women	Stopped early; lack of efficacy	PO daily Truvada
VOICE	Young, unmarried women	Gel failed	PO daily tenofovir or Truvada or Vaginal tenofovir gel
CAPRISA 004	Women	39% overall (54% high-adherers)	Vaginal tenofovir gel
Bangkok	IV drug users	49%	PO daily tenofovir

(eg, access to patient-friendly care is often poor for uninsured/underinsured patients) or patient-related failures (eg, they fail to recognize their risk for infection, be tested or get follow-up care).^{3,4}

HIV Medications as Prevention in Seronegative Patients

Researchers have begun to evaluate a new approach to HIV prevention known as Pre-Exposure Prophylaxis (PrEP). It is aimed at high-risk uninfected persons.

In July of 2012, the Food and Drug Administration approved tenofoviremtricitabine (Truvada), a drug originally approved for use in combination ART for treatment of HIV infection, for use in PrEP. The sentinel study that led to Truvada's approval for PrEP, the iPrex study, demonstrated that use of Truvada decreased HIV acquisition by 44% in highrisk MSM as compared with placebo.

Adherence to the medication regimen emerged as a major issue in the iPrex study. In that study, patients took their medication on their own. When their serum levels of tenofovir-diphosphate were measured, it was determined that those who seroconverted to HIV were not taking their PrEP regularly, while those who were taking four to seven doses a week had a risk reduction rate of 96% to

99%.⁶ (A separate pharmacokinetics study [the STRAND study] had demonstrated how adherence is reflected in plasma levels.)

Various studies have evaluated PrEP in different subpopulations and using different formulations (pills, vaginal gel), and all have consistently demonstrated that adherence is the major contributor to efficacy in terms of prevention (Table 1).⁷⁻¹² The lack of efficacy in the FemPrEP and Voice studies, for example, was the result of low adherence rates among women in Africa.^{9,10}

PrEP in the United States

Although PrEP has been prescribed in various clinics in the United States, 13 utilization has been low during the two years since its approval. The number of highrisk patients who know about PrEP, who seek it out and who, in turn, are on a regimen remains low. Recently, after a twoyear period evaluating preliminary recommendations and gathering experience and public feedback, the Centers for Disease Control and Prevention (CDC) published clinical practice guidelines for the use of PrEP to prevent HIV infection. 14 Key aspects of the CDC's PrEP guidelines are summarized in Table 2. The World Health Organization also recently endorsed the use of PrEP for high-risk populations, particularly MSM.15

There is little real-world published data on experience with PrEP in the United States outside of a research setting. Thus, we present our experience at Hennepin County Medical Center (HCMC) in Minneapolis, where we opened the first PrEP clinic in Minnesota in the fall of 2012. As of June 2014, we had enrolled 34 patients ranging in age from 20 to 59 years. Of those, 73% are male, 24% female and 3% transgender; all have a variety of risk factors for HIV infection. For the 23 MSM patients, the most common risk factor was having one or more HIV-positive partners or multiple partners of unknown HIV status; for the 11 heterosexual patients, the most common risk factor was having an HIV-positive partner.

The HCMC PrEP clinic follows the CDC's guidelines for lab monitoring and follow-up.14 During the initial visit, patients undergo the following labs: HIV via viral load or HIV antibody-antigen combo, hepatitis B surface antibody and antigen, hepatitis B core antigen, complete blood count and differential, basic metabolic panel, liver function, rapid plasma reagin, urine gonorrhea and chlamydia. Patients are scheduled to return for follow-up visits every three months (testing during those visits includes: basic metabolic panel, STIs every 12 months or more frequently based on risk, HIV serostatus and pregnancy testing as needed).

Since adherence has been a major concern in all of the PrEP studies, we have been conducting a pilot study looking at adherence by measuring tenofovir levels from both plasma samples and dried blood spots obtained from consenting patients. 16,17

Our preliminary findings show that a majority of our patients have been adherent to PrEP. Based on our plasma tenofovir level data, 11 out of 14 patients had levels within the range suggestive of taking a dose of Truvada within the past 24 hours. The investigational dried blood spot test assesses a longer window of tenofovir adherence (similar to the HbA1c test for glucose levels as compared with a single glucose test as assessment for

glucose control). Preliminary data from our first 13 patients assessed with suitable dried blood spot samples showed that all were found to have a level of tenofovirdiphosphate equivalent to that associated with taking four to seven doses per week, which provides a 96% to 99% level of protection against HIV. All of our PrEP patients have remained HIV seronegative during the two-year observation period. In our experience to date, we have found that PrEP is well-tolerated, safe and effective. This has encouraged us expand our efforts to promote the use of PrEP.

Barriers to PrEP Use

Reasons for low PrEP use include its cost, social stigma and lack of general knowledge that it is available. PrEP costs approximately \$1,000 a month. For highrisk populations (MSM who don't use condoms), analysis has shown that PrEP is cost-effective.18 In Minnesota, most insurance companies now pay for PrEP. But some insured patients may decide they cannot afford it because of their policies' co-pays and/or high deductibles. Even if drug costs are covered, the lab testing and clinic visits may not be. Although we have been following the CDC's guidelines for follow-up visits (every three months for patients during their first year on PrEP), our experience has led us to decrease the frequency of clinic visits to every six months for those who have been stable for more than 12 months, are reliable with follow-up visits and have had no deleterious side effects from the medication.

Another major barrier to PrEP use is the belief that it promotes unsafe sex practices, as it takes away the fear of acquiring HIV. Similar arguments have been used in the past when talking about birth control (oral contraceptives and Plan B, the morning after pill), the human papilloma virus vaccine and safe needle programs for IV drug users. All of those prevention methods have become relatively accepted as appropriate. In our experience, human behavior is difficult to change and current unsafe sexual practices will likely continue regardless of PrEP use. Those individuals

TABLE 2

Summary of CDC Guidance for PrEP Use in Target Populations

	MEN WHO HAVE SEX WITH MEN	HETEROSEXUAL WOMEN AND MEN	INTRAVENOUS DRUG USERS		
	71111111111111		2110 2 22211		
Detecting substantial risk of acquiring HIV infection	HIV-positive sexual	HIV-positive sexual	HIV-positive injecting		
	partner	partner	partner		
	Recent bacterial STI	Recent bacterial STI	Sharing injection		
	High number of sex	High number of sex	equipment		
	partners	partners	Recent drug treatment (but currently injecting)		
	History of inconsistent or no condom use	History of inconsistent or no condom use			
	Commercial sex work	Commercial sex work			
		In high-prevalence area			
		or network			
Clinically eligible	Documented negative HIV test result before prescribing PrEP				
	No signs/symptoms of acute HIV infection				
	Normal renal function; no contraindicated medications				
	Documented hepatitis B virus infection and vaccination status				
Prescription	Daily, continuing, oral doses of TDF/FTC (Truvada), ≤ 90-day supply				
Other services	Follow-up visits at least every 3 months that include the following:				
	HIV test, medication adherence counseling, behavioral risk reduction support, side effect assessment, STI symptom assessment				
	At 3 months and every 6 months thereafter, assess renal function				
	Every 6 months, test for bacterial STIs				
	Do oral/rectal STI	Assess pregnancy	Access to clean		
	testing	intent	needles/syringes		
		Pregnancy test every 3 months	and drug treatment services		

who were cautious prior to using PrEP will presumably continue to be so while on it. Studies have consistently demonstrated that PrEP does not lead to riskier sex among MSM.19 Nonetheless, counseling about safe sex and risk reduction is an integral part of our PrEP program and takes place at every patient visit.

A potential strategy that may be more cost-effective is intermittent or on-demand use of PrEP. At the recent International AIDS Conference in Melbourne, Australia, preliminary data from a French study among MSM found that intermittent use of PrEP (taking Truvada two to 24 hours

The Centers for Disease Control and Prevention has established a National PrEP Consultation Hotline to assist clinicians in use of PrEP. Call 855 HIV PrEP or 855-448-7737.

before sex and daily for 48 hours after sex) is both feasible and effective. 20,21

Conclusion

Whether PrEP will significantly reduce the number of new HIV infections is uncertain, but it clearly holds promise, given that it may be up to 99% effective when the drugs are taken daily. In the absence of an effective HIV vaccine, the potential for effective chemoprophylaxis cannot be discounted.

Our initial experience with PrEP has been favorable. Our pilot data demonstrate that a majority of patients are adherent to the medication schedule when counseled about the importance of daily administration. Side effects have been minimal, confirming that PrEP is both a safe and effective prevention strategy. Going forward, greater awareness among physicians, public health authorities and patients will be imperative if we are to more broadly use

PrEP to prevent HIV infection in highrisk patients, particularly MSM. MM

Caitlin Eccles-Radtke was an infectious disease fellow at the University of Minnesota and is currently a staff physician with HealthPartners. Keith Henry is with Hennepin County Medical Center's department of infectious disease.

Disclosure: Keith Henry receives funding for clinical research from Gilead and GSK/ViiV.

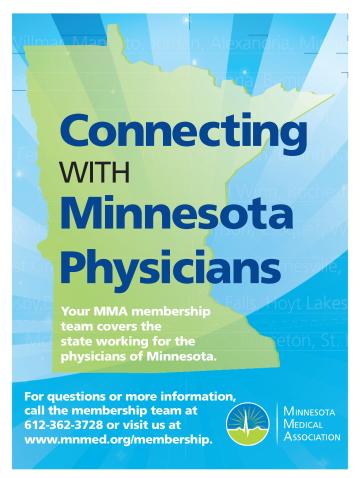
REFERENCES

- 1. Cohen MS, Chen YQ, McCauley M, et al. Prevention of HIV-1 infection with early antiretroviral therapy. N Engl J Med. 2011;365(6):493-505.
- 2. Johnson AS, Hall HI, Hu X, et al. Trends in diagnosis of HIV infection in the United States, 2002-2011. IAMA 2014: 312(4):432-4
- 3. Gardner EM, McLees MP, Steiner JF, Del Rio C, Burman WJ. The spectrum of engagement in HIV care and its relevance to test-and-treat strategies for prevention of HIV infection. Clin Infect Dis. 2011:52 (6):793-800
- 4. Centers for Disease Control and Prevention. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. MMWR. 2006;55 (No. RR-14).
- 5. Grant RM, Lama JR, Anderson PL, et al. Preexposure chemoprophylaxis for HIV prevention in men who have sex with men. N Engl J Med. 2010; 363(27):2587-99.
- 6. Anderson PL, Glidden DV, Liu A, et al; iPrEx Study Team. Emtricitabine-tenofovir concentrations and pre-

- exposure prophylaxis efficacy in men who have sex with men. Sci Transl Med. 2012;4 (151):151ra125.
- 7. Thigpen MC, Kebaabetswe PM, Paxton LA, et al; TDF2 Study Group. Antiretroviral preexposure prophylaxis for heterosexual HIV transmission in Botswana. N Engl J Med. 2012; 367(5):423-34.
- 8. Baeten IM Donnell D Ndase P et al: Partners PrEP Study Team. Antiretroviral prophylaxis for HIV prevention in heterosexual men and women. N Engl J Med. 2012; 367(5):399-410.
- 9. Van Damme L, Corneli A, Ahmed K, et al; FEM-PrEP Study Group. Preexposure prophylaxis for HIV infection among African women. N Engl J Med. 2012; 367(5):411-22.
- 10. Marazzo J, Ramjee G, Nair G, et al. Pre-exposure prophylaxis for HIV in women: daily oral tenofovir, oral tenofovir/emtricitabine, or vaginal tenofovir gel in the VOICE study (MTN 003). 20th Conference on Retroviruses and Opportunistic Infections, March 3-6, 2013, Atlanta, GA: (Abstract 26LB)
- 11. Abdool Karim Q, Abdool Karim SS, Frohlich JA, et al; CAPRISA 004 Trial Group. Effectiveness and safety of tenofovir gel, an antiretroviral microbicide, for the prevention of HIV infection in women. Science. 2010;329(5996):1168-74.
- 12. Choopanya K, Martin M, Suntharasamai P, et al. Antiretroviral prophylaxis for HIV infection in injecting drug users in Bangkok, Thailand (the Bangkok Tenofovir Study): a randomised, doubleblind, placebo-controlled phase 3 trial. Lancet. 2013;381(9883):2083-90.
- 13. Karris MY, Beekman SE, Mehta SR, Anderson CM, Polgreen PM. Are we prepped for preexposure prophylaxis (PrEP)? Provider opinions on the real-world use of PrEP in the United States and Canada. Clin Infect Dis. 2014;58(5):704-12.
- 14. U.S. Public Health Service Centers for Disease Control and Prevention—Preexposure Prophylaxis

- for the Prevention of HIV Infection in the United States -2014. A clinical practice guideline. Available at www.cdc.gov/hiv/pdf/PrEPguidelines2014.pdf. Accessed November 17, 2014.
- 15. World Health Organization. Guidance on oral pre-exposure prophylaxis(PrEP) for serodiscordant couples, men and transgender women who have sex with men at high risk of HIV. 2014 July. Available at: www.who.int/hiv/pub/guidance_prep/en/ Accessed October 3, 2014.
- 16. Centers for Disease Control and Prevention. Interim guidance: preexposure prophylaxis for the prevention of HIV infection in men who have sex with men. MMWR Morb Mortal Wkly Rep. 2011;60(3):65-8.
- 17. Castillo-Mancilla JR, Zheng J-H, Rower JE, et al. Tenofovir, emtricitabine, and tenofovir diphosphate in dried blood spots for determining recent and cumulative drug exposure. AIDS Res Hum Retroviruses. 2013:29(2):384-90.
- 18. Juusola JL, Brandeau ML, Owens DK, Bendavid E. The cost-effectiveness of preexposure prophylaxis for HIV prevention in the United States in men who have sex with men. Ann Intern Med. 2012;156(8):541-50.
- 19. Liu AY, Vittinghof E, Chillag K, et al. Sexual risk behavior among HIV-uninfected men who have sex with men participating in a tenofovir pre-exposure prophylaxis randomized trial in the United States. J Acquir Immune Defic Syndr. 2013;64(1):87-94.
- 20. Fonsart J, Capitant C, Spire B, et al. High adherence rate to intermittent oral PrEP with TDF/ FTC among high risk MSM (ANRA Ipergay). 20th International AIDS Conference 2014 July 20-25; Melbourne, Australia: Abstract THAC0203.
- 21. Initial results of the iPergay study. Available at: http://i-base.info/ipergay-prep-study-shows-earlyefficacy-in-protecting-gay-men-from-hiv/. Accessed November 11, 2014.

Family Medicine





EMPLOYMENT OPPORTUNITIES

Family Medicine Physician for a unique clinical environment

The Pipe Trades Family Health and Wellness Center is looking for a FAMILY MEDICINE PHYSICIAN to work in a unique non-profit, self-insured center that provides primary care to pipe trades union workers and their families in the metro area. We are currently recruiting a full-time physician without obstetrics for an outpatient-only practice in White Bear Lake and Maple Grove, MN.

- Appointments are 30 to 60 minutes
- Prevention is the main focus
- No insurance billing
- **Call duties: phone only**
- **Electronic Medical Records and Charting**
- Must be BC/BE in Family Practice
- 1-3 years of experience preferred
- Competitive compensation and benefits package

Apply to Mark Lemke | 612-356-3665 | FAX: 651-348-8853 | markl@ptsmnhealth.org 4520 Centerville Rd.

White Bear Lake, MN 55127

https://www.ptsmn.org/wellness.html

Pipe Trades Health and Wellness Center is an Equal Opportunity Employer.





St. Cloud VA Health Care System

Opportunities for full-time and part-time staff are available in the following positions:

- Dermatologist
- Geriatrician/Hospice/Palliative Care
- Internal Medicine/Family Practice
- Medical Director, Extended Care & Rehab (Geriatrics)
- Ophthalmologist
- **Psychiatrist**

Applicants must be BE/BC.

US Citizenship required or candidates must have proper authorization to work in the US. Physician applicants should be BC/BE. Applicant(s) selected for a position may be eligible for an award up to the maximum limitation under the provision of the Education Debt Reduction Program. Possible recruitment bonus. EEO Employer



Located sixty-five miles northwest of the twin cities of Minneapolis and St. Paul, the City of St. Cloud and adjoining communities have a population of more than 100,000 people. The area is one of the fastest growing areas in Minnesota, and serves as the regional center for education and medicine.

Enjoy a superb quality of life here—nearly 100 area parks; sparkling lakes; the Mississippi River; friendly, safe cities and neighborhoods; hundreds of restaurants and shops; a vibrant and thriving medical community; a wide variety of recreational, cultural and educational opportunities; a refreshing four-season climate; a reasonable cost of living; and a robust regional economy!



Since 1924, the St. Cloud VA Health Care System has delivered excellence in health care and compassionate service to central Minnesota Veterans in an inviting and welcoming environment close to home. We serve over 38,000 Veterans per year at the medical center in St. Cloud, and at three Community Based Outpatient Clinics located in Alexandria, Brainerd, and Montevideo.

Competitive salary and benefits with recruitment/relocation incentive and performance pay possible.

For more information:

Visit www.USAJobs.gov or contact Nola Mattson (STC.HR@VA.GOV)

Human Resources 4801 Veterans Drive St. Cloud, MN 56303 (320) 255-6301 EEO Employer



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

For more information, go to www.mnmed.org/careercenter



WANTED **QUALITY INTERNISTS** AND PEDIATRICIANS

Top 20% income as a partner! Full time = 4 office days per week! Independent practice with ownership!

Lakeview Clinic is seeking BE/ BC physicians to join our independent, multispecialty, physician-owned group in the southwest metro. Enjoy the best of both worlds, from rural to suburban in one of our 4 sites. Our topnotched group consists of family physicians, internists, pediatricians, OB/GYNs, and surgeons.

CONTACT: Sandra Beulke, MD PHONE: 952-442-4461

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



EMPLOYMENT OPPORTUNITIES



The Alexandria Clinic, P.A. is a multi-specialty group practice. We are located two hours west of the Twin Cities on I-94 in the heart of Lakes Country. Named one of the Top Ten Small Towns in the Country by livability.com, Alexandria is home to a service area approaching 100,000 people and over 1,000 growing businesses.

> We're easy to get to and hard to leave!

Employment Opportunities:

- ▶ Urology
 ▶ Dermatology
- ▶ Oncology ▶ Rheumatology
- Neurology ► OB/Gyn
- ► Emergency Room Physicians

For more information, contact: Alexandria Clinic Attn: Brad Lenertz 610-30th Ave W Alexandria, MN 56308 Phone: (320) 763-2540 email: blenertz@alexclinic.com www.alexclinic.com

Trusted Care. For Generations.



In the heart of the Cuyuna and Brainerd Lakes region of Minnesota, the medical campus in Crosby includes Cuyuna Regional Medical Center, a regional hospital and clinic offering superb facilities with a surgery center that functions like tertiary center. Outdoor activities abound and with the Twin Cities and Duluth less than two hours away, you can experience a work/life balance filled with recreation and culture.

Enhance your professional life in an environment that provides exciting practice opportunities in a beautiful Northwoods setting. The Cuyuna Lakes region welcomes you.

We invite you to explore our opportunities in:

- Family Medicine
- Hospitalist
- Orthopaedic Surgeon
- Orthopaedic Physician Assistant





Contact: Todd Bymark, tbymark@cuyunamed.org (866) 270-0043 / (218) 546-4322 | www.cuyunamed.org

Bluestone Physician Services is an innovative, on-site primary care practice that specializes in seeing patients in assisted living communities. We are dedicated to serving those who are underserved in traditional care settings. Bluestone is on the leading edge of positive change in the national healthcare system.

Physicians at Bluestone enjoy the following advantages:

- Company is physician owned and managed
- Potential to develop your own team of Advance Practice Providers, RN's and support staff
- Efficient software tools to remotely manage patients
- National reputation for innovation and quality of care
- Winner of StarTribune's "Top Workplaces" survey in 2014 (#4) and 2013 (#11)
- Excellent competitive pay, full benefits, potential for

We currently have practice opportunities in the Minneapolis/St. Paul, Milwaukee, Tampa and Orlando areas.

> Please contact careers1@bluestonemd.com for more information





Fairview Health Services

Opportunities to fit your life

Fairview Health Services seeks physicians to improve the health of the communities we serve. We have a variety of opportunities that allow you to focus on innovative and quality care. Be part of our nationally recognized, patient-centered, evidence-based

We currently have opportunities in the following areas:

- Allergy/ Immunology
- Dermatology
- Emergency Medicine
- Family Medicine
- General Surgery
- Geriatric Medicine
- Hospice
- Hospitalist
- Internal Medicine
- Med/Peds
- Ob/Gyn
- Orthopedic Surgery
- Pain
- Psychiatry
- Rheumatology

Visit fairview.org/physicians to explore our current opportunities, then apply online, call 800-842-6469 or e-mail recruit1@fairview.org

Sorry, no J1 opportunities.

fairview.org/physicians TTY 612-672-7300

昭 FAIRVIEW



The perfect match of career and lifestyle.

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

- ENT
- Med/Peds Hospitalist • OB/GYN
- Psychology

- Family Medicine
- Oncology
- Psychiatry

 Gastroenterology General Surgery

• Infectious Disease

• Internal Medicine

- Orthopedic Surgery
- Pulmonary/Critical Care Rheumatology

- Hospitalist
- Outpatient Internist/
- Geriatrician
- Urgent Care Urologist
- Pediatrics

For additional information, please contact:

Kari Lenz, Physician Recruitment karib@acmc.com, 320-231-6366 Richard Wehseler, MD rickw@acmc.com

Sioux Falls VA Health Care System

"A Hospital for Heroes"

Working with and for America's Veterans is a privilege and we pride ourselves on the quality of care we provide. In return for your commitment to quality health care for our nation's Veterans, the VA offers an incomparable benefits package.

The Sioux Falls VAHCS is currently recruiting for the following healthcare positions.

- Cardiologist (part-time)
- Endocrinologist
- Oncologist
- Primary Care (Family Practice or Internal Medicine)
- Psychiatrist
- · Pulmonologist

Applicants can apply online at www.USAJOBS.gov

They all come together at the Sioux Falls VA Health Care System. To be a part of our proud tradition, contact:



Human Resources Mgmt. Service 2501 W. 22nd Street Sioux Falls, SD 57105 (605) 333-6852

www.siouxfalls.va.gov

Urgent Care



We have part-time and on-call positions available at a variety of Twin Cities' metro area HealthPartners Clinics. We are seeking BC/BE full-range family medicine and internal medicine pediatric (Med-Peds) physicians. We offer a competitive salary and paid malpractice.

For consideration, apply online at healthpartners.com/careers and follow the Search Physician Careers link to view our Urgent Care opportunities. For more information, please contact diane.m.collins@ healthpartners.com or call Diane at: 952-883-5453; toll-free: 1-800-472-4695 x3. EOE



healthpartners.com

Spinal muscular atrophy

BY ARIELA TAUB, MD

That summer, my camper

Was radiant as the foliage in fall,

A dove zooming through black water

In a slick, onyx power chair.

If she was my daughter,

I'd know I had made the world

A bit more beautiful.

She never crawled.

Never stood,

Never walked.

Confined to her first wheelchair

Since a few weeks after she

Had first pinched her lips

Into spoken words.

Dependent for life

To get dressed,

To shower,

Or even to use the bathroom.

And yet she was so graceful, grateful,

For the chance to meet

Such wonderful people,

She had said.

I will always remember

The way her face glowed

Like a luciferase and luciferin

Reaction, in a firefly's tail,

As she chanted a church canticle

With unabashed innocence

And complete bliss.

Ariela Taub studied biology and creative writing at Johns Hopkins University, where she also served as editor of her university's literary magazine. She is a recent graduate of the University of Maryland Medical School and co-founder of the nonprofit Music is Medicine.



Advocate FOR YOUR profession!

Day at the Capito

Legislators really do listen to physicians! They trust your expertise to help guide them through health care legislation. We will meet with key legislators to make a difference:

- Fix the prior authorization mess
- Increase loan forgiveness for physicians
- Extend the primary care payment bump
- Further regulate e-cigarettes and flavored tobacco products
- And more issues that directly affect physicians' practices

Join us for a day of advocacy. You'll hear personally from legislative leaders and get a chance to meet with your representative and senator one-on-one.





Join us for Day at the Capitol on

Wednesday, March 11, 2015 12:30 pm in Saint Paul

(Moved to the DoubleTree by Hilton in downtown St. Paul due to the Capitol renovation)

Free for members; \$49 for nonmembers

For more information go to www.mnmed.org/DAC2015

The more we get together, the happier and healthier we'll be.



At MMIC, we believe patients get the best care when doctors, staff and administrators are humming the same tune. So we put our energy into creating risk solutions that help everyone feel confident and supported. Solutions such as medical liability insurance, physician well-being, health IT support and patient safety consulting. It's our own quiet way of revolutionizing health care.



To join the Peace of Mind Movement, give us a call at **1.800.328.5532** or visit **MMICgroup.com.**

