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ALSO INSIDE:

Independent physicians go it not quite alone
The varying facades of **health care homes**



MINNESOTA MEDICAL ASSOCIATION

NOVEMBER 2012

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Solving the cost conundrum

As I write, the United States is entering the homestretch of its quadrennial presidential cavalcade, a seemingly endless procession that has winnowed a field that included the obtuse, obscure and the sometimes obnoxious down to two front-runners with vastly different views of what this country should look like. To emerge at the head of such a group requires bottomless pits of money, a glittering public persona and superhuman stamina. The winnowing wind is not a gentle grain-separating breeze but a hurricane-force torrent of microscopic media surveillance, repetitive campaign stops and contentious debates. The gale is enough to ruffle even Mitt Romney's coiffure.

Photo by Scott Walker

President Obama's 2010 Affordable Care Act has become a symbol of what separates Republican from Democratic ideas.

As it has for decades, health care tops the issue list. President Obama's 2010 Affordable Care Act (ACA) has become a symbol of what separates Republican from Democratic ideas. Fueled by the mounting federal deficit, the relentless escalation of health care costs, and the dire predictions about Medicare and Medicaid's financial future, liberals and conservatives argue government versus market solutions, exchanges versus vouchers, and old Medicare versus a new yet-to-be defined form of Medicare.

Yet both parties acknowledge the need for cost control. Both accept that Medicare and Medicaid should exist in some form in the future. And both the Republicans' and Democrats' proposals ensure that the health insurance industry will be with us for long time.

In a recent *New England Journal of Medicine* piece, Mitt Romney painted a post-ACA picture of a *Consumer Reports* health care system, in which "price-sensitive, quality-conscious" patients will choose among providers and insurers competitively vying for their business. He envisions patients buying insurance products unencumbered by tax disadvantages or pre-existing conditions. Although not spelled out in the article, his Medicare plans would follow his running mate Paul

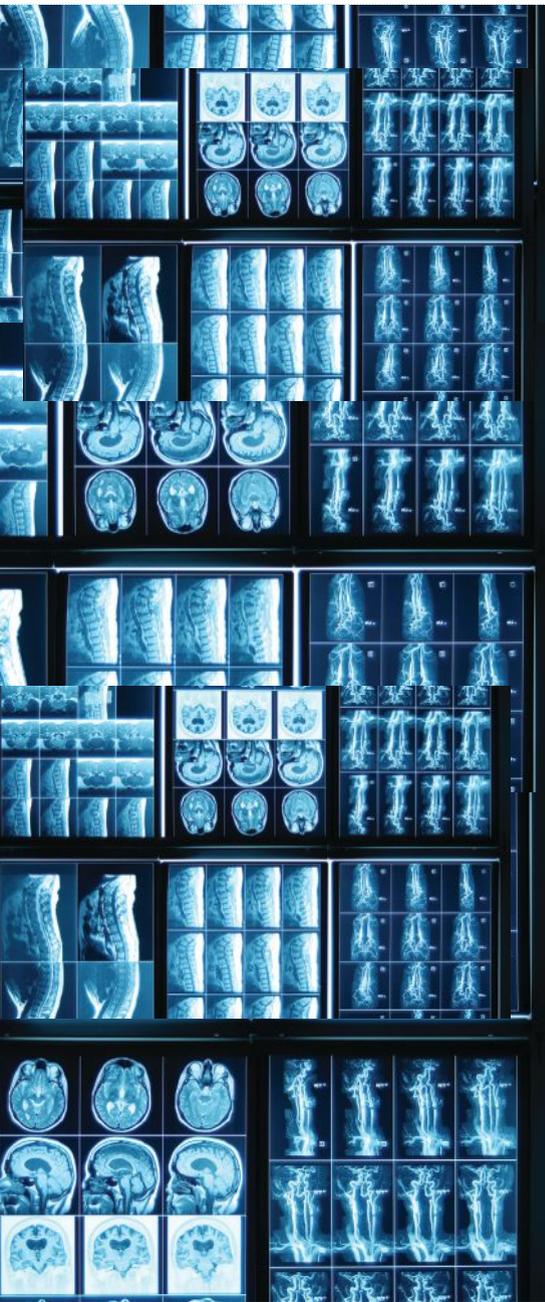
Ryan's proposal to give future seniors vouchers to purchase coverage from competitively bidding health plans and provide premium "support" for the poor and the sick. Romney would continue Medicaid through block grants to states.

In another *New England Journal of Medicine* article, President Obama reviewed the components of the ACA—no lifetime caps on insurance, no copays for preventive care, no penalty for pre-existing conditions and promotion of accountable care organizations (ACOs) to stimulate innovation in health care delivery. He also proposed a permanent fix to the Medicare payment formula for physicians and malpractice reform.

So how is any of this going to solve the cost conundrum? The Romney-Ryan plan contends that by unleashing a vast army of smart shoppers the market will work its magic. What will prevent health care shysters from convincing a passel of unwitting buyers to purchase an auto without tires is not clear. What will steer our 80-year-olds, clutching their vouchers, to a good value that won't bankrupt them with hidden add-ons is not clear. Obama's Affordable Care Act relies on rooting out health care fraud and abuse and on the pay-for-quality promise of ACOs and medical homes. Whether there is more juice to squeeze from the fraud lemon is not clear. And whether ACOs are glorified capitated HMOs destined for the same fate as previous efforts is not clear.

This month's articles on ACOs, independent practice and medical homes try to clarify what health care's future might look like regardless of the election's outcome. By the time you read this, the presidential debates will have passed. But the debate over how best to take care of America's health will be with us for decades to come. **MM**

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■ Quality and cost

Spotlight on overuse

The ABIM Foundation has organized a campaign to encourage physicians and patients to talk about the fact that certain medical tests and procedures may be unnecessary and may even cause harm. Thus far, nine medical specialty organizations have signed on to the campaign, called Choosing Wisely, each issuing a list of five tests or treatments related to their specialty that should be questioned before being ordered in certain situations. For example, on the American Academy of Family Physicians' list is imaging for low-back pain, antibiotics for sinusitis, DEXA screening for osteoporosis, EKGs and Pap smears.

In a separate effort, the Joint Commission and the AMA's Physician Consortium for Performance Improvement (PCPI) held a national summit on treatment overuse in September. The event focused on overuse of percutaneous coronary intervention, blood transfusions, ear tubes for brief periods of fluid behind the ear drum, antibiotics for viral upper respiratory infections and early induction of labor without medical need.

Speakers stressed that they wanted to recast the issue of overuse. Mark R. Chassin, M.D., president of the Joint Commission, urged physicians to take the lead on the issue so that the public would understand that a discussion about overuse was not a discussion about rationing care. Bernard M. Rosof, M.D., chair of the PCPI, noted that the time was right for a reframed discussion of overused treatments. "There is a sense by the consumer that there's overuse and that this is costly to the United States and that we need to get back to the delivery of appropriate medical care," he said.

Choosing wisely

The nine specialty groups that have issued "Five Things Physicians and Patients Should Question" lists:

- American Academy of Allergy, Asthma and Immunology
- American Academy of Family Physicians
- American College of Cardiology
- American College of Physicians
- American College of Radiology
- American Gastroenterological Association
- American Society of Clinical Oncology
- American Society of Nephrology
- American Society of Nuclear Cardiology

Access the lists at http://choosingwisely.org/?page_id=13.

check this out



Mayo Clinic has released what it's calling the **Anxiety Coach**. Among the app's features are a short self-test to measure the severity of one's fears and worries, a library of more than 500 activities for mastering anxiety, a means for tracking anxiety levels and

progress, and tools for learning about when anxiety is a problem and how to find treatment.

The app was developed by Stephen Whiteside, Ph.D., director of the Pediatric Anxiety Disorders Program at Mayo Clinic, and Jonathan Abramowitz, Ph.D., an adult anxiety disorders specialist at the University of North Carolina, with funding from the Mayo Clinic Center for Innovation.

The app is available through the iTunes store.

■ Medicaid

Minnesota gets high rating for prevention

Although it is often criticized for its low payments to physicians, Medicaid generally does a good job of covering preventive services for its beneficiaries.

In a September 2012 report, the Kaiser Family Foundation noted that Medicaid programs in 44 of 48 states surveyed covered at least 30 of 42 recommended preventive services.

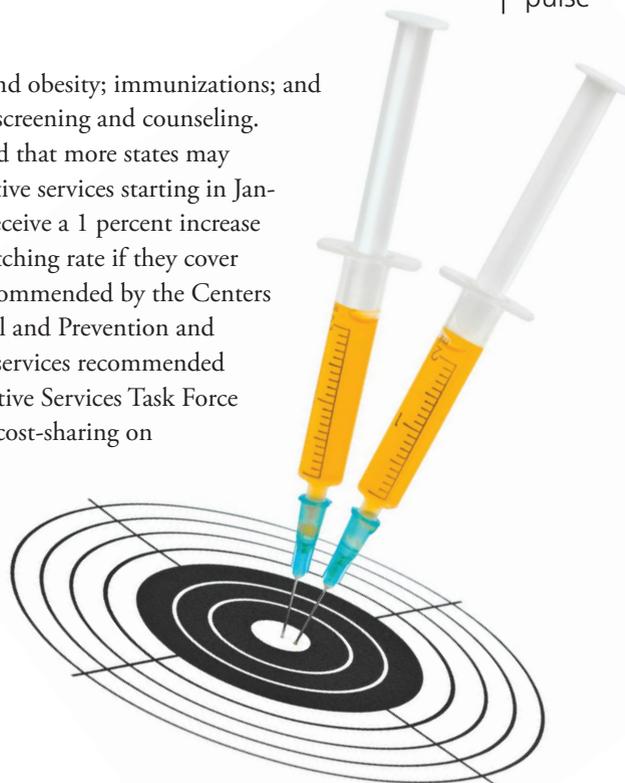
Minnesota was one of 13 states that covered all 42 services; it was one of five that covered those services without cost-sharing on the part of patients.

The services included breast, cervical and colorectal cancer screenings; STD screenings; screenings for blood pressure, cholesterol, diabetes, osteoporosis and depression; counseling related to alcohol and

tobacco use, diet and obesity; immunizations; and pregnancy-related screening and counseling.

The report stated that more states may cover more preventive services starting in January, as they will receive a 1 percent increase in their federal matching rate if they cover immunizations recommended by the Centers for Disease Control and Prevention and certain preventive services recommended by the U.S. Preventive Services Task Force without imposing cost-sharing on beneficiaries.

Source: Kaiser Commission on Medicaid and the Uninsured. Coverage of Preventive Services for Adults in Medicaid. Available at: www.kff.org.



■ Physician satisfaction

Dissatisfied docs

Doctors aren't a happy lot these days, according to two recent surveys about physician career satisfaction.

A 2012 report by the Physicians Foundation found physicians are disillusioned about the state of medical practice and the health care environment. According to the findings from a survey of more than 13,500 U.S. physicians from all specialties, more than 84 percent think the medical profession is in decline and more than three-quarters are pessimistic about its future. In addition, more

than a third said they would not choose medicine as a career if they had to do it over again. (Satisfaction varied according to demographics; the most dissatisfied respondents tended to be older, male and specialists who owned their practices.)

Some of the factors contributing to their dissatisfaction weren't surprising: More than 98 percent cited too much regulation and paperwork, more than 95 percent cited loss of clinical autonomy, and more than 92 percent mentioned erosion of the physician/patient relationship as reasons why they think the profession is in decline.

What is concerning is the effect these sentiments could have on practice, as more than half of the respondents indicated they plan to make or are making changes that could affect patient care. For example:

- Physicians already are working 5.9 percent fewer hours than they did four years ago, which is equal to the loss of 44,250 full-time positions in the physician workforce, and 22 percent of respondents said they plan on cutting back on hours in the next three years.

- 13.4 percent said they plan on retiring in the next three years, and more than 60 percent said they would retire today, if they had the means.
- 8.6 percent have closed their practices to Medicare patients, and more than half have limited or are planning to limit the number of Medicare patients they see.
- More than a quarter have closed their practices to Medicaid patients.

In a 2012 study on medical practice and physicians' attitudes, Jackson Healthcare found similar thinking with regard to leaving or cutting back practice. Of the more than 2,200 physicians who responded to their survey, 16 percent said they plan to or are considering retiring, transitioning to part-time work or leaving medicine altogether in the next year.

The authors of both reports noted that these trends are cause for concern at a time when doctors are already in short supply.

Sources: A Survey of America's Physicians: Practice Patterns and Perspectives, The Physicians Foundation, September 2012; A Tough Time for Physicians: 2012 Medical Practice and Attitude Report, Jackson Healthcare.



Maria Veronica Svetaz, M.D., M.P.H., is the medical director of a program for Latino youth in Minneapolis that has become one of the state's certified health care homes.

Photo by Steve Wewerka

■ Health care homes

House plans

Built to meet particular needs, health care homes don't necessarily look alike. | BY CARMEN PEOTA

Six staff members from *Aquí Para Tí*, a program for Latino youth in Minneapolis, are gathered around a table to talk about their patients on a Wednesday afternoon at Hennepin County Medical Center's (HCMC) East Lake Street Clinic in Minneapolis. One reports on an 11-year-old who has just been released from inpatient treatment for depression. There's good news, she says. The man who raped the girl three years ago will be prosecuted. Another staff member reports on a new patient, an 18-year-old who was referred to the clinic by his parents because of problems with truancy and suspected drug use. She tells the group that she called the young man's high school with his approval and found out he has a learning disability. She also reports that he admitted to having multiple sexual partners and that she dispatched him with a bag of condoms.

So goes a weekly case management meeting for *Aquí Para Tí*, which was created in 2001 with an Eliminating Health Disparities Initiative grant from the Minnesota Department of Health

to prevent pregnancy among young Latinos. By 2007, staff found themselves serving more as a referral service for teens in crisis and concluded they were offering the kind of health care the pediatrics community long had been advocating for: care that took into consideration not just the patient's medical needs but also the family, social, psychological and economic issues that played into their health and well-being. They were a medical home.

When pediatricians coined the term "medical home" in the mid-1960s, their idea was that each child would have a place where his or her records were stored. Over the years, the concept broadened, and the term now refers to a care model that is coordinated rather than fragmented and better meets the needs of patients with complex conditions. During conversations leading up to the passage of Minnesota's health care reform legislation in 2008, the medical home idea (in Minnesota we call it a "health care home") was held up as a strategy for reducing costs as well.

To encourage their development, the law allowed for the state to make payments (\$50 to \$60 per person per month) to primary care providers who would offer care coordination for patients receiving Medical Assistance. In 2010, clinics began submitting their applications to the state (the state developed six standards for becoming certified as a “health care home”), and as of September of this year, there were 192 certified health care homes serving 2 million Minnesotans, according to the Minnesota Department of Health.

Some clinics jumped when they had the opportunity to become a health care home. Others moved more slowly. Some have had to build from the ground up. Others simply tweaked what they were already doing. Although all of the state’s health care homes have had to meet the same standards for certification, each has its own personality. That’s because the populations they serve are so different. Here, we look at three examples that reflect some of the diversity.

Starting from scratch

Leaders at Golden Valley-based Courage Center, which provides services to people with disabilities, have long thought the health care system doesn’t serve their population very well. According to John Tschida, vice president of public affairs and research, people with disabilities can be the most complex of complex patients—and the most expensive. They often have multiple chronic conditions and are under the care of a number of specialists. “More often than not,” he says, “they won’t have a relationship with a primary care doctor.” So when their blood pressure spikes or they get a urinary tract infection, or when they need a flu shot or preventive screening, they’re often not sure where to turn. “They’re just not served well by what I would call the ‘generic’ health care system,” he says.

That got them thinking: Why couldn’t they create a health care home for disabled people? Other organizations in the state were taking existing physician practices and adding social workers and

nurses and nonmedical services in order to earn certification. Courage Center already had those pieces in place. “We just needed a doctor,” Tschida says.

With a \$200,000 grant from the Minnesota Department of Human Services, they began developing a primary care clinic at Courage Center’s main location in Golden Valley. It opened in 2009 and was certified as a health care home in 2011. The clinic is staffed by a part-time internal medicine physician, three nurse practitioners, a clinical social worker and certified medical assistants. Care coordination is primarily done by the nurse practitioners but can be a team effort. Psychiatry and physiatry services are on site, as are social workers and occupational, physical and speech therapists. In addition, patients have access to the therapy, adaptive sports and training programs that Courage Center has long offered.

Courage Center’s approach to primary care is designed for people who might

have as many as a dozen chronic conditions (the clinic focuses on five that are the most common causes of preventable hospitalizations in their population: diabetes, pneumonia, urinary tract infection, seizures and wounds). Standard office visits are 20 to 40 minutes long, and the primary care clinic makes use of a telemedicine system and volunteers to monitor patients at home.

Tschida says the health care home has served more than 200 patients. In a January report to the Department of Human Services, Courage Center claimed those patients had a hospitalization rate of 2.4 days per year, down from 11.16 days per year when the patients first enrolled in the health care home; this translated to estimated savings to the state of \$2.38 million. Courage Center also reported improvements in patients’ perception of their health and satisfaction.

Although the state may be seeing benefits, Courage Center itself is struggling to make the health care home model

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work financially and, thus, has chosen not to market it widely. “We’ve proven we can reduce overall costs to the system,” Tschida says. “But right now the only additional revenue we are getting for the patients in our health care home is the monthly care coordination payment. On average, that’s about \$60 per member per month. That’s helpful but woefully inadequate.”

Tschida says they’ve taken steps to find other revenue sources, including renegotiating non-fee-for-service reimbursement arrangements with health plans. For now, a three-year \$1.7 million Centers for Medicare and Medicaid Services Innovation Challenge grant will allow Courage Center to continue its medical home. Whether it can be sustained beyond that will depend on further changes to the payment system. “We’re trying to run away from fee-for-service as fast as we can,” Tschida says. “For us, payment reform can’t come fast enough.”

Primary care for HIV patients

Even before it became a certified health care home in 2010, the infectious disease department at HealthPartners Specialty Clinic in St. Paul was changing the way it was providing care to patients with HIV. Leaders realized that because of the dramatic improvements in treatments, HIV patients were living much longer than they had been and that co-morbidities such as diabetes, hypertension and heart disease were becoming as much a threat to their patients’ health as AIDS. They also noticed that patients were going to their HIV doctors, instead of primary care providers, to get help for those problems. Rather than attempt to get patients to go elsewhere for care, HealthPartners decided to bring internal medicine and family medicine specialists into the infectious disease department to provide primary care.

With that piece in place, the infectious disease department asked if they might join with other HealthPartners primary care clinics in seeking health care home

certification. “They learned about this and said, ‘We’re providing primary care in the infectious disease department; we want to be part of this,’” says Ann Murray, specialty operations manager for HealthPartners. So in 2010, the department became a certified health care home for patients with HIV.

HealthPartners’ systemwide solution for providing care coordination was to move RNs into that role. “Before this,” Murray says, “RNs in outpatient clinics were really focused on triage—they pretty much sat on the phone and did a lot of that work.” Now, she says, RNs see patients either before they see their physician or sometimes instead of their physician. Murray says a big part of their work is encouraging patients to articulate their health priorities. “What we’ve found in the past two years is that the medical providers may think they know what the patient’s needs are, but they don’t,” Murray says. “There are so many underlying things [that factor] in patients’ health—like not being able to afford healthy food or not feeling safe in their neighborhood or drug use. If we don’t address those first, some of those other recommendations from the physician really aren’t going to happen.”

To meet those needs, the department also provides access to an array of supports. Four social workers, funded through the Ryan White program, are co-located at the clinic and often see patients at the time they visit their doctors or the nurse. The RNs, physicians, pharmacists and social worker all have access to the patient’s medical record and record their notes, recommendations and observations in it.

Another unique feature is that there is a medication management program on site. A pharmacist will meet with patients to talk about potential side effects of medications and emphasize the importance of adherence to treatment regimens. Murray notes this is especially valuable for newly diagnosed patients. They might see a physician one week and a pharmacist the next. “That enables us to have regular contact during a critical time,” she says.

“

We’re trying to run away from fee-for-service as fast as we can. For us, payment reform can’t come fast enough.

”

—John Tschida

About 50 people are enrolled in the health care home. But Murray says all 670 HIV patients they serve benefit from their revamped approach to care. She speculates that the numbers will grow as patients gain better understanding of what having a health care home means. “Trying to explain this program to patients has been challenging,” she admits.

A home for Latino youth

By 2008, Aquí Para Tí realized it was already doing what Minnesota as a state was then just conceiving. “When we learned the state would start paying for the health care home model, we laughed,” says Maria Veronica Svetaz, M.D., M.P.H., the program’s medical director, “because that’s what we do.” Yet Aquí Para Tí did not pursue certification immediately, as staff were concerned that the way health care homes were being rolled out at the state level was geared more toward adults with chronic illnesses than pediatric patients.

Their thinking had shifted by 2010, when HCMC was working on seeking certification for its primary care clinics. “Two weeks from certification, we said, ‘Hey, can we jump in?’” Svetaz says, explaining that HCMC staff helped them

complete the paperwork. “In two weeks we had everything ready because we were already a health care home.”

What was (and is) in place is a staff composed of Svetaz, two care coordinators, a parent educator, a college connector, a program developer and a program coordinator, all of whom are bicultural and bilingual. Also in place is a care model that allows them to spend extended periods of time with patients. The initial office visit lasts about two hours. Svetaz provides everything from flu shots to sports physicals to prenatal care. She’ll also treat parents of the teens and the teens’ children, up to age 5. Other staff provide counseling, referrals to community services, help getting into college and that essential piece—care coordination. “The model is truly comprehensive,” Svetaz stresses.

Much of the focus is on mental health because Latino teens are at higher risk for depression and anxiety than their peers and have higher rates of suicide attempts. Svetaz says that’s because they face both the pressures and developmental changes all teens face as well as the challenge of navigating between cultures.

Svetaz clearly believes the health care home model is the right one for her patients. “It’s truly patient- and family-centered. And it’s about population management,” she says. And for someone deciding to move from concept to construction, she’s got encouragement: “You look at who you are serving, what are their main needs and strengths, and how you should repackage the services that you are doing so that it matches the needs of your own population. For us, it didn’t change anything.” **MM**

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By banding together, independent physicians are better able to negotiate with health plans and participate in quality improvement activities.

■ Independent practice

Going it not quite alone

By joining a network that helps with the details of practice, independent physicians are surviving and even thriving.

| BY HOWARD BELL

While serving last August on a Lake Superior Medical Society panel that was debating the pros and cons of the Affordable Care Act, David McKee, M.D., a neurologist in Duluth, voiced his concern that the law contained “poison pills” that would make it difficult for independent practices such as his to survive. “Oh, well,” another panelist replied. “We don’t expect independent practices to survive.”

“I was taken aback,” says McKee, who is with Northland Neurology and Myology. “Most people on that panel matter-of-factly assumed that 30 percent of Minnesota physicians and 65 percent of physicians nationwide should just forfeit the practices and patient relationships they’ve worked so hard to establish.”

Pressures facing Minnesota’s 4,000 to 4,500 physicians who work for themselves rather than a health system have never been greater. Complying with state and federal mandates to implement electronic health record systems and payer requirements for achieving quality benchmarks has become more and more costly and time-consuming. Even just getting paid a fair amount for services provided is getting more complicated. As a result, many independent groups have sold out to larger organizations. But not all. A number have chosen to remain independent. And many of those have joined one of several organizations in the state created to help them deal with these issues and compete with big systems.

Duluth-based Integrity Health Network (IHN), for which McKee is currently medical director of specialty care, was created in spring of 2010 when the 29 primary care and specialty clinics of Northstar Physicians Network joined forces with the 11 specialty clinics of Northland Medical Associates. Since then, IHN’s membership has grown from 176 physicians at 40 clinics to 225 physicians at 50 clinics. In addition, the network includes several independent mid-level providers throughout northeastern Minnesota and northwestern Wisconsin. Recently, IHN began partnering with another network, the Collaborative Care Cooperative, which represents more than 500 physicians in 20 specialty practices, most of which are in the Twin Cities metro area.

The Midwest Independent Practice Association (MIPA) in Bloomington includes 400 independent primary care physicians at 41 clinics mostly in southern Minnesota and western Wisconsin. The association was created in 2000 when the Minnesota Healthcare Network, a group of primary care physicians, merged with Minnesota Specialty Physicians. Originally, MIPA’s goal was to develop cost-containment models for various disease categories, which they still do, according to medical director John English, M.D. Then in 2005, when pay for performance

Pressures facing Minnesota's 4,000 to 4,500 physicians who work for themselves rather than a health system have never been greater.

came on the scene, MIPA began helping member physicians with the requirements for participating in it. "Doctors were hit with expanded IT and documentation requirements," English says. MIPA's staff has helped them stay in compliance.

The Heartland Healthcare Network in Fargo and the Rural Health Cooperative in Cottonwood, Minnesota, are two similar networks. Heartland has 80 physician members in Minnesota and North Dakota. The Rural Health Cooperative includes 20 hospitals and 24 clinics in southwestern Minnesota. Clinics pay dues to belong to these organizations. They also appoint representatives to sit on governing boards that oversee a small staff.

Saving time, saving money

The big advantage to belonging to a network, of course, is that they handle administrative tasks that physicians don't always want to do or do well. "Physicians still own their practices and have full control over every aspect of their practices. The only thing that changes," English says, "is that the organization serves as a back office that helps with mountains of compliance paperwork and payer contracting so independent physicians can spend more time where they belong—with their patients."

For Duluth internist Susanne Pearce, M.D., being part of IHN makes independent practice feasible, as it allows her to be on the preferred provider list of nearly every health plan that serves the area.

"They negotiate much better health plan reimbursements for me than I'd be able to get myself, plus I don't have to spend so much time on it," she says.

McKee says payers have no interest in negotiating fair-market reimbursement with small practices. "There's no question we're getting a better rate than we would get on our own," he says. IHN members aren't obligated to contract with payers through IHN, says Bruce Penner, IHN's director of quality. "And we never promise clinics that their reimbursements will improve; but as a general rule that almost always happens."

IHN staff also help member clinics set up the data-collection process for quality improvement activities including those required by health plans, specialty medical societies and MN Community Measurement. They even do some of the analysis and keep on top of the ever-changing requirements. "The quality-assurance work they help me with is a biggy," Pearce says, "because it's so time-consuming."

In addition, IHN recently began an eight-month initiative to help member primary care clinics become certified as health care homes by the Minnesota Department of Health. Becoming a health care home allows clinics to be reimbursed for care coordination, which is intended to lead to improved quality of care, cost efficiency and patient satisfaction. Achieving certification can require clinics to reorganize, which can take a lot of time. Christopher Wenner, M.D., who owns a solo practice in Cold Spring, Kundel Pediatric Associates and St. Cloud Medical Group are already certified, according to IHN medical director for primary care David Luehr, M.D. "By year-end, we hope five more will be." MIPA also has three certified health care homes and hopes to add five more by the end of the year.

Besides helping with compliance, contracting and quality assurance, IHN and MIPA get members better prices on medical and office supplies and services, a big

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benefit, according to Matt Brandt, CEO of Multicare Associates, a MIPA member with 23 primary care physicians in Fridley, Blaine and Roseville. “Over the years, we’ve been able to leverage significant discounts from suppliers, lab and radiology services, and consultants that help with IT, medical home model implementation, quality process redesign and reporting to the state.”

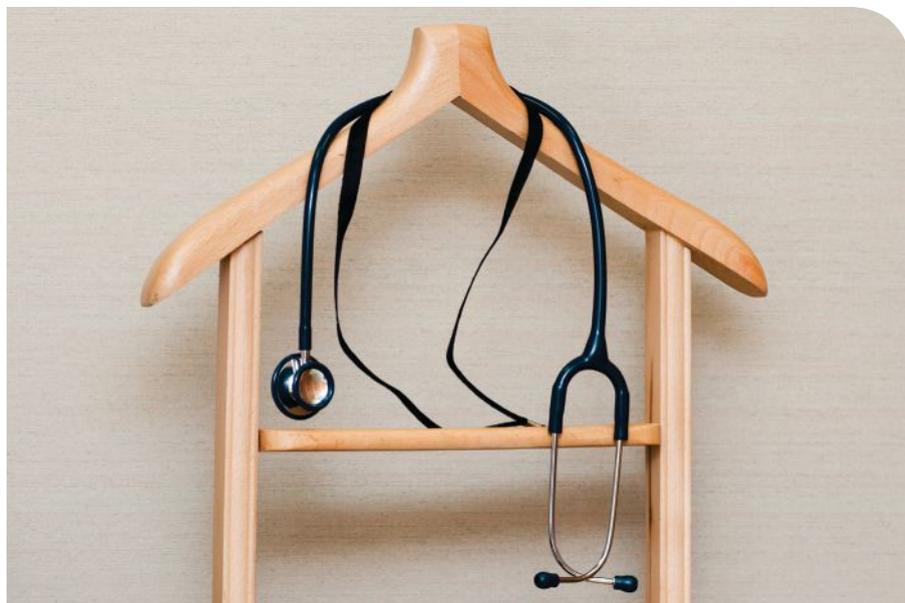
During 2010 and 2011, IHN saved members more than \$1 million on medical and office supplies, according to Luehr. “That’s \$4,106 per physician,” he says. “On malpractice insurance premiums, we saved \$750 to \$1,250 per physician.” Members of MIPA have seen similar savings, English says.

The networks also help with marketing and advertising, and provide a forum for sharing concerns and ideas about how to handle quality improvement and electronic health record mandates. “Sharing information is the biggest benefit to us,” says Multicare’s Brandt. “Being able to share information among the different independent groups has helped us learn best practices in all areas of practice, from clinical services to business models.”

Quality accolades

Independent clinics have been recognized for providing high-quality care. Earlier this year, the Minnesota Health Action Group (formerly the Buyer’s Health Care Action Group) honored six IHN member clinics with Bridges to Excellence awards for providing patients with superior vascular care and diabetes management. The clinics were Duluth Family Practice Center, Cromwell Medical Clinic, Northland Family Physicians, Raiter Clinic, Longville Lakes Clinic and Lake Superior Internal Medicine.

Last September, Cromwell Medical Clinic’s lone family physician Shawn Bode, M.D., was listed as the top physician in *Consumer Reports’* “Health Report for Minnesota—Northeast Region” for providing patients with optimal diabetes management. He also received a Bridges to Excellence Attainment Award for diabetes care.



Why go solo?

Why do physicians want to remain independent in an environment that encourages consolidation? Of course, each has his or her own reasons. But physicians often talk about having the freedom to practice the way they want to.

After 10 years of being employed by a large Duluth system, internist Susanne Pearce, M.D. had become frustrated with big-system medicine and left that practice. A no-compete clause in her contract meant she had to either leave town or go independent. So in 2000, she went solo and hasn’t looked back. “I don’t have to deal with big-system politics. I can schedule patients the way I want to, spend more time with them when needed and give them better quality of care,” she says.

David McKee, M.D., a neurologist who practices with Northland Neurology and Myology in Duluth, a practice he founded in 1993, expresses a similar sentiment. “Employed physicians give up so much,” he says. “They’re sometimes forced to make referrals within their system, even if it’s not best for patients.” He says it’s “nice to not be under the thumb of an administration that may or may not share my moral and ethical beliefs about patient care.”—H.B.

In 2011, the Institute for Clinical Systems Improvement (ICSI) invited IHN to become a member. ICSI did this to recognize IHN clinics’ quality of care and give IHN physicians the chance to review and comment on ICSI’s clinical guidelines and protocols. Quality rankings for MIPA and IHN clinics keep improving at the health plan reporting level and in MN Community Measurement reports, according to English and Penner. “This makes member clinics more valuable to

health plans, which in turn reward our members with pay-for-performance bonuses for meeting quality and efficiency targets,” Penner explains.

Penner says he thinks the high quality of care provided by many independent practices has gone unnoticed because it simply hasn’t been promoted. “You don’t hear as much about the cost-effective quality independent practices bring to health care,” he says, “because we don’t have a big apparatus for collecting the

data and communicating it to the public. The street-level performance of independent practices is not appreciated, but it's starting to be."

The ACO question

Being part of a network may also prove valuable as independent practices figure out their role in accountable care organizations (ACOs) or enter into "shared-savings contracts." Through these contracts, physicians who provide care to a population of patients at a cost that is lower than what is projected and still meet quality benchmarks are paid a percentage of the savings as a type of performance bonus. Thus far, most of the ACOs or ACO-like organizations that have formed in Minnesota have involved large health systems partnering with insurers, and some have questioned whether there is even a place for independent practices in ACOs.

English believes there is, and MIPA is currently negotiating with HealthPartners, UCare and Blue Cross and Blue Shield of Minnesota. The cost targets and split rates on savings are part of the negotiations. "Independent practices have a long history of providing cost-effective, high-quality care," he says.

IHN is also gearing up to form an ACO and is working with all health plans in the region to get payment models flowing through an ACO framework, according to Penner.

Right now, says English, "the ACO movement is a free-for-all, with groups like MIPA proposing ACOs and health plans coming up with their own." As called for by the Patient Protection and Affordable Care Act, the Centers for Medicare and Medicaid Services has introduced the Medicare Shared Savings Program, in which practices can voluntarily participate.

Eventually, all physicians who wish to take care of Medicare patients may be required to participate in the Medicare program, English says. If that happens, he believes independent practices may be even more motivated to join a network like MIPA and IHN. Those outside of a network may not be able to provide

Task force identifies ways to strengthen independent practices

In 2011, the MMA formed a task force to identify threats to independent medical practices and develop recommendations to address them. The task force includes 10 physicians representing a variety of specialties from throughout Minnesota.

The task force defined independent practice as a medical practice that has three characteristics: physician ownership, physician governance and physician-owners who have a business/financial risk. It also examined data on the physicians and practices that met that definition.

According to John English, M.D., an Apple Valley family physician and task force member who is also medical director of the Minnesota Independent Physicians Association in Bloomington, the task force asked the MMA's Board of Trustees to act on several issues:

- Recognize independent practices as essential to the health care delivery system because they offer physicians and patients a viable choice for work and for care
- Advocate for policies that call on payers to reimburse providers the same amount for the same service regardless of whether they practice in a large system or a small clinic
- Support policies that allow patients to choose their physicians without regard to their practice arrangement
- Help reduce administrative burdens on physicians such as mandates for reports that don't offer "value" to patients and employers, prior authorization, claims-processing resubmissions and redundant performance measures.

At its September meeting, the task force discussed strategies the MMA might take to promote independent practice, one of which is to develop written materials about the wide range of medical practice opportunities available in Minnesota that can be shared with medical students, residents or practicing physicians.—H.B.



all types of care ACO patients need, nor would they be big enough to have reliable risk prediction or receive a reasonable slice of the shared savings, English says.

"A doctor or clinic can choose not to be in any ACO," he says. "But they will not be able to see patients who have an ACO-type of health insurance plan." Also, according to Penner, ACOs will likely magnify the difficulties of overhead control, contract negotiations and quality mandates independent physicians are already struggling with.

Regardless of the challenges, McKee is committed to doing what he can to remain independent. "The more I've seen what it means to not be independent, the more important it is for me to remain independent," he says. And as he and other independent physicians are learning, the key to staying independent is to acknowledge the need for a certain amount of interdependence. **MM**

ON THE PATH TO ACOS

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SHARED SAVINGS

SHARED RISK

PARTNERSHIPS

CLINICS

PREVENTION

HOSPITALS



HEALTH RECORD



HEALTH OUTCOMES



PERFORMANCE METRICS



PAYERS



CARE COORDINATION



TOTAL COST OF CARE



ION

Providers
and **payers**
test new care
delivery and
payment
models.

By **TROUT LOWEN**

COMMUNICAT

Across the country, health care organizations are experimenting with accountable care organizations (ACOs) and ACO-like pilot projects.

In the broadest terms, an ACO is an alternative to the fee-for-service business model in which groups of providers (hospitals, clinics, pharmacists and physicians) voluntarily agree to deliver comprehensive medical care for a specific patient population for a set fee from the government or a private insurer. Those who meet certain benchmarks for outcomes and costs get to keep some of the savings. (Some ACOs are built on a shared-risk model, in which providers that fail to reduce spending will also have to share in the costs.) The ultimate goal of any ACO is improving the health of its defined population, and improving the experience of care while reducing costs.

Much of the early work around ACOs is being shaped by the Center for Medicare and Medicaid Innovation through two pilot programs created in the wake of the 2010 federal health care reform legislation. The

Medicare Shared Savings Program financially rewards ACOs that improve patient health on 33 quality standards while slowing the growth of health care spending. It does not change Medicare's fee-

for-service payment structure.

The Medicare Pioneer ACO Program is similar to the shared savings program for the first two years; but it targets organizations that already have some experience with coordinating care for patients across various settings. Participants in pioneer ACOs can earn larger bonuses than those in the shared-savings program; but they also face financial penalties if they fail to



achieve spending targets. Pioneer ACOs that show a minimum amount of savings after two years will be eligible to transition away from receiving fee-for-service payment to getting a set fee per patient per month during the last three years of the pilot.

Although this may sound like a retread of HMOs from the 1980s and 1990s, where physicians were paid a certain amount of money per month to care for patients, there are differences. Unlike HMOs, patients do not need to enroll in an ACO, they are free to go to any provider that accepts Medicare, and they don't need prior authorization to see a specialist outside of the ACO. In fact, many patients may not even know they're in an ACO. Three Minnesota providers, Allina Health, Fairview Health Systems and Park Nicollet Health Services, were among the first 32 health care organizations in the country selected to participate in the Medicare Pioneer ACO Program, which began on January 1, 2012. But even before the first pioneer program participants were announced last December, several Minnesota health care providers and insurers were rolling out ACO-like programs.

One such initiative, Hennepin Health, is expanding the practice of health care beyond the traditional boundaries for some of Hennepin county's poorest residents. Allina Hospitals and Clinics has teamed up with competitor HealthPartners to create the Northwest Metro Alliance, a shared-savings arrangement for residents in the Twin Cities' northern suburbs. Duluth-based Essentia Health was one of 116 organizations selected to participate in the Medicare Shared Savings Program. This article looks at how these three efforts are progressing.

Caring for the neediest

Hennepin Health is a pilot program involving the county's Human Services and Public Health Department, Hennepin County Medical Center (HCMC), Metropolitan Health Plan (the county's health plan), and Northpoint Health and Wellness Center that seeks to improve health outcomes for residents covered by Medical Assistance while lowering costs by coordinating medical and behavioral health care and human services. Specifically, the program seeks to reduce the number and length of hospital stays, decrease reliance on expensive emergency department services and prevent duplication of care.

Hennepin Health's target population is single nondisabled adults, ages 21 to 64 years, with incomes at or below 75 percent of poverty. These individuals often receive little preventive care, and most

have one or more chronic conditions. They also have poor health outcomes and health status.

The idea behind Hennepin Health, says Mark Linzer, M.D., director of general internal medicine at HCMC, is that significant improvements in health outcomes for this patient population can't be achieved without first addressing factors. They might need help finding housing, with transportation, or finding and keeping a job. For example, a diabetic patient who is homeless won't have anywhere to store insulin, and the medication can easily go bad if not kept at the proper temperature. Patients without adequate access to transportation are much more likely to miss clinic appointments.

"We needed to build a system that first and foremost looks at the social determinants of health," Linzer says. "What is wrong with my

patient that I can't fix in this room but that somebody else could?"

In order to better address the concerns of these high-need patients, an interdisciplinary team of physicians, hospital administrators and county officials, including representatives from housing, transportation and social services, began meeting about 18 months ago to develop the new integrated care model.

To create the program, Metropolitan Health Plan, doing business as Hennepin Health, signed a contract with the state to care for up to 10,000 patients. The state pays a per member per month fee to cover the cost of their care. If at the end of the year there are dollars left over, the four partners will use that money to continue building the program. If there is a loss, the partners will cover that responsibility. Hennepin Health launched in January 2012 with 4,884 patients. By September, more than 5,800 were enrolled in the program.

When patients first come to one of the participating clinics, their social, behavioral and medical needs are assessed, and staff can begin working on various issues before the patient even sees a physician. Patients are assigned a care coordinator and are then evaluated by a physician and assigned to one of three tiers, depending on the level of care they need. Tier 3 provides the highest level of care to patients with the most complex problems; these patients often have a history of three or more hospital stays per year. They receive intensive management for chronic pain, mental illness and chemical dependency, plus social services, job support and access to a nurse who coordinates their care. Tier 2 patients have chronic conditions

and may have a history of one to two hospital stays per year. Tier 1 patients have the fewest medical, psychological and chemical dependency concerns. Those in



Tiers 1 and 2 receive social services along with preventive medical care and care coordination. Information about patients in all three tiers is stored in Hennepin Health's common data warehouse.

Although the patients in Tier 3 are just a small percentage of HCMC's total patient population (140,000 people), they represent a proportionally greater potential for reducing costs, Linzer says. The hospital has had to add staff to support the program, but the cost of doing that has been minor compared with the potential savings, he says. "Eliminating even a couple of hospital stays will pay for a lot of staff," he notes. Reducing hospital stays means reduced revenues, and that has required leaders to shift their thinking. But it is an idea the hospital has been willing to embrace. "Health is the goal," Linzer says. "So if the hospital has to shift so resources are devoted to preventing illness and preserving health, then we'll do that."

It is too early to pronounce the program a success, Linzer says. However, early indicators are moving in the right direction. As of September, the hospital's data showed the number of visits to primary care clinics increasing, emergency room visits staying about the same, and hospital readmissions decreasing slightly, Linzer says.

Plans are in place to expand the program to additional Medical Assistance patients. HCMC is also starting to use the approach for uninsured patients.

"It's hard not to believe in it," Linzer says. "It's got all of the right things going for it."

Collaboration instead of competition

Well before the implementation of the federal Patient Protection and Affordable Care Act, Allina Hospitals and Clinics and HealthPartners (which provides health care through its clinics and hospitals as well as health insurance) had embarked on an ACO-like cost-sharing



arrangement for 27,000 residents in the Twin Cities' northern suburbs who have HealthPartners insurance, receive care at eight HealthPartners and Allina clinics, and use Mercy Hospital.

Discussions began after HealthPartners indicated it was considering moving patients to another hospital or building an urgent care facility in the area. Such changes would have drawn significantly from Mercy's patient base, says Penny Wheeler, M.D., chief clinical officer of Allina Health. "HealthPartners was 40 percent of Mercy's volume," she says, "so if they were going to build their own, then we were going to have big issues, too. This way, we could just use what's in existence and actually improve the care experience and lower costs together."

So the two competitors sat down to discuss what they could do that would benefit both of them. The result of those discussions was the creation of the Northwest Metro Alliance, a seven-year pilot project. The Alliance has three main undertakings: improving care coordination between the clinics and hospital for patients with chronic conditions in order to reduce admissions and readmissions; using HealthPartners' multiple-population health data model to identify variations in treatment patterns and clinic practices; and sharing electronic health information between the organizations to coordinate care and improve efficiency.

Initiated in 2009, the Alliance is already showing significant results in terms of slowing the growth of spending and improving health outcomes for the target population, according to Wheeler and Brian Rank, M.D., medical director of HealthPartners Medical Group. In its second year, the rate of growth in total risk-adjusted medical

Early adopter

Why has Minnesota been among the nation's leaders in testing the accountable care concept? Brian Rank, M.D., medical director of HealthPartners Medical Group, attributes the willingness to experiment to Minnesota's collaborative health care culture and early adoption of electronic medical record (EMR) systems. Electronic medical records are essential for coordinating patient care and reducing costs, which are at the heart of the ACO model, Rank says. According to the Minnesota Department of Health, 86 percent of hospitals in the state had an EMR system in 2010. In 2011, 72 percent of clinics were using an EMR system.

In addition, Rank says, quality improvement organizations such as the Institute for Clinical Systems Improvement and MN Community Measurement have made improving care and tracking performance a priority. These organizations have helped make it possible for Minnesota's health care providers to share information and learn from each others' successes. —T.L.



spending for those 27,000 patients decreased by nearly 7 percent, from 8.09 percent annually in 2009 to 0.91 percent in 2011, an estimated reduction of \$3 million.

That in part was the result of outside factors, Rank says, noting that health care costs have been falling across the country over the last two years. But a large proportion can be tied to specific efforts to improve care in five areas identified by a joint steering committee of physicians and administrators from both organizations: increasing the use of generic medications; ending voluntary induction of labor before 39 weeks; expanding access to mental health services; providing additional support to patients who were frequent visitors to the ED; and using shared EMRs and a diagnostic decision-support tool developed by HealthPartners to improve the accuracy and appropriateness of MRI and CT ordering. By focusing on all of those areas, Wheeler says, “we were able to maintain or improve quality and reduce costs quite significantly. It was quite impressive.”

Increasing the use of generic medicines from 75 to 80 percent saved around \$1 million, Rank says. Decision-support embedded in the EMR helped reduce the number of CT and MRI scans by 1,500, and increased the number of colorectal cancer screenings by 1,400. The rate of elective induction of labor before 39 weeks dropped from 8 percent to zero, Wheeler says, a change that was driven by clinical data that showed eliminating the practice resulted in shorter labor, fewer cesarean sections and



fewer complications for newborns. And while those changes were initiated for the ACO population, they are now being implemented system wide.

“We don’t just say we’re going to do that for this person because they’re one of the 27,000,” Wheeler says. “We’ll do that for everybody.”

Although the Alliance has shown success thus far, Rank and Wheeler say building trust between organizations and with physicians has been challenging. Physicians were concerned that efforts to reduce costs not come at the expense of patient care, and that new practices and procedures not be added to their already hectic schedules. Having hard data on patient outcomes has helped allay concerns about the first issue. “Doctors are scientists, so we like almost bomb-proof data,” Rank says. “I don’t think we’ve had much pushback from docs once they saw what the data say.”

As physicians themselves, Rank and Wheeler say they have also worked hard to make sure that any new physician responsibilities were offset by eliminating others. One example of that, Rank says, is the diagnostic imaging decision-support tool that gives physicians an immediate, one-click alternative

to making prior authorization calls. “Actually, docs love that,” he says.

One of the biggest challenges facing this ACO and others, Rank and Wheeler say, is patient mobility. Patients are free to seek care elsewhere, yet the ACO is still accountable for the total cost of their care.



Data-driven reform

Duluth-based Essentia Health was one of the first health care organizations in the country selected to participate in the Medicare Shared Savings Program. In many ways, the organization, which has clinics and hospitals throughout northern Minnesota and in Wisconsin and North Dakota, was already on board with the ACO concept, says John Smylie, Essentia’s chief operating officer.

“So much of what’s occurring in accountable care has really been in the DNA of Essentia Health,” he says. “We don’t look at it as just a fad term. It really is a framework to pursue the goals of the Triple Aim.”

Over the past two years, Essentia has been rewriting contracts with commercial payers, including Blue Cross and Blue Shield of Minnesota and HealthPartners, to include total-cost-of-care payment arrangements based on performance and quality measures. Now with the addition of 33,000 Minnesota Medicare patients

covered under the shared-savings program, approximately 50 percent of Essentia’s patient population will be covered under some type of ACO arrangement, Smylie says.

Although the individual ACO contracts differ slightly, all of them have similar components, Smylie says.

Each one ties payment to performance on anywhere from 10 to 60 quality measures; each also takes into account the extent to which the total cost of care is reduced. In addition, the insurers are required to provide access to full information on all patients. “So whether it’s a commercial carrier like HealthPartners, Blue Cross or CMS, we have access to information that here-to-for we really didn’t see,” Smylie says.

Essentia is using that population health data to create new tools that flag high-risk patients and identify clinic trends that can improve care or reduce costs.



One tool analyzes patient data each week and segments patients into risk categories. Clinics then get an updated list of high-risk patients, those who have complex health problems or chronic conditions. A nurse can then contact those patients to schedule a clinic visit, monitor symptoms and identify problems before they become emergencies. “In the old days, a physician would try to manage that care within the confines of an office visit, which is totally insufficient,” Smylie says. “So now we’re driving this information into the practice every week. We’re reaching out and trying to prevent the next admission to the hospital or the emergency room because not only is it costly, it also is a huge burden to that patient and their family.”

That’s one of the pieces that’s most tangible to physicians, Smylie says. “We’ve got some long-term physicians who have been practicing for 20 or 30 years that see this and they’re saying, ‘I wish I had this 20 years ago. I could have really helped a lot more people and would have organized care better.’” There’s a new department within Essentia Health that is charged with analyzing patient charts for safety concerns and looking for larger trends that might improve patient care. That kind of analysis might result in a new alert inserted into the EMR, Smylie says.

It’s too early to tell if the shared-savings model will yield significant savings for Essentia, Smylie says, but he believes it is “bending the cost curve in the right direction.”

Smylie offers a few words of advice to other organizations as they move toward accountable care models. Go slow. Make small, incremental changes. Involve physicians, other clinicians and patients in the decision-making process.

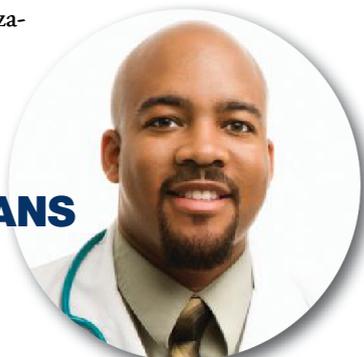
“We’ve been advancing in little steps for the last three to four years and building our competencies to execute accountable care while we’re taking on increasing risk. That protects the organization from a catastrophic change,” he says. “If you get too far ahead of it, then you may grow expenses faster than you can start yielding return on them. The margins in health care are so slim that you could cause financial harm to the organization.” **MM**

Trout Lowen is a freelance writer in Minneapolis.

CLINICS



PHYSICIANS



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The checkup

Decisions about care sometimes involve more than medicine.

By Dan Pease, M.D.

It was a perfect fall day in a Midwestern town that might as well be called Pleasantville. The road we followed meandered around a lakeshore lined with oak trees not yet ready to relinquish their yellowing leaves and led to a row of homes facing a generous park. The playground was deserted as the neighborhood kids were still at school. Despite the idyllic setting, all was not well in one particular home. We parked across the street and hesitantly trudged up the driveway. The landscaping was not up to par—trees and bushes were ragged, the grass not golf-course green. A fresh coat of stain on the rambler’s dull wooden siding would have brightened things up. Still, as we reached the front steps, I could see the lakeside view that shimmered through the picture window.

Bill’s wife had died a few years back, leaving him the lone occupant of the house, their long-time residence. Several days earlier, a neighbor had contacted Adult Protective Services (APS), concerned about his living conditions. Ellen, the county worker assigned to the case, had gone to investigate and was alarmed. She found Bill disheveled, confused, his house a mess. She took pictures of fecal-stained carpets. Now she was returning with me, an intern able to count the months since graduation on one hand, as the “medical expert” to aid in justifying the next steps. I could see the county sheriff and an ambulance approaching

in the distance, ominously crawling up the quiet avenue. This would be no ordinary home visit.

We knocked on the front door several times. No answer. The living room television was blaring, the 24-hour news channel clearly audible from the front yard. Ellen went around back to peer through the windows. Finally, Bill popped his head up from a recliner and ambled over to the front door. Gangly and pale, the right lens of his eyeglasses conspicuously absent, his untrimmed white beard crusted with debris from a long-forgotten meal. He stared out at us through the screen door as if we were trying to sell him a vacuum cleaner.

Ellen noted that he had on the same soiled clothes he had been wearing during her previous visit, grey pants and a maroon sweatshirt. A middle-aged woman with darting eyes and halting speech, Ellen was not exactly a pillar of confidence as we stood at the verge of this encounter. After re-introducing herself to Bill, who was clearly less-than-pleased to see her again, she tossed it to me. “A doctor is here to ask you some questions.”

During the 20-minute drive from downtown, I’d struggled to define my role in this delicate situation. I was on a month-long geriatric medicine rotation, and this was my first experience with APS. Instructed to leave my stethoscope behind, I was not spe-

cifically on a medical visit—so much for the trusted town doctor with a well-worn black leather briefcase full of tools and clinking vials at the bedside of his ailing patient performing the healing art of medicine. Whether I was to contribute to the decision about his care or simply rubber-stamp this grim parade was not entirely clear to me. Not wanting to let my newly acquired title of physician go to waste (never mind the “intern” qualifier), I chose the former role even though I knew that the latter was more likely.

Ellen had briefed me on the case during the ride over. Granted access to a thin file containing documents and pictures, I was careful not to turn the page—“That part’s confidential,” she had warned. Because EMS was meeting us, it seemed to me the decision had already been made to bring Bill in for a medical evaluation. So as a stranger standing literally on his doorstep, I set out to decide if I agreed with this assessment.

A support system
of family and home
services along with
follow up by a
medical team would
have allowed for
Bill’s return home.

**But it was an
unlikely scenario.**

Bill held his blank stare for several seconds before finally pushing the screen door open. Planting myself firmly on his front step, I held out my hand. “How are you doing today, sir?”

“I feel fine. Why are you bothering me?”

“Well, Bill, we are concerned about your health. Do you know why we might think that way?”

No, he definitely did not and insisted everything was fine. Basic orientation questions—the month, year, president—were answered incorrectly or not at all. He reported seeing his doctor just two months ago. I reminded him that it was more like two years ago and for lung cancer follow-up, no less. His miscalculation seemed more confabulation than deception. Significant mental impairment was apparent.

“What if we take you into the hospital today for a checkup, Bill?” Wanting no part in it, he sat down on a bench outside the front door as Ellen and I walked inside.

After entering the vestibule, Ellen handed me surgical shoe covers and latex gloves, as if we were entering a crime scene. I glanced around as I slipped them on. The living room was filled with stacks of newspapers. A thick layer of dust covered the furniture. An empty bottle of metoprolol, which had expired a year ago, sat long abandoned on the kitchen table. The inside of the fridge was a barren white landscape populated only by half-empty bottles of ketchup and mayonnaise; the milk was spoiling. Most telling were dark brown streaks on the carpet, unmistakable for feces, that led out of the bathroom, through the hallway and into the bedroom. It matched the discoloration running down Bill’s trouser legs. I had seen enough. Trying to sound decisive, I turned toward Ellen and stated, “You’re right. He needs to come in.”

Except he clearly had no intention of going. Was I to consider his preferences? No. This was not a time for shared decision-making. Bill’s mental status had deteriorated to the point where he needed overruling.

As I exited the front door, Bill was still sitting at the top of the steps. I tore off the shoe covers and gloves, trying to hide my discomfort. He looked defeated, as if he knew the inevitable. I repeated the same statement I had made before, my voice rising to disguise it as a question. “We’d like to send you to a hospital and get you checked out Bill. We are worried about your safety.” He remained seated, shook his head and muttered something. The paramedics escorted him to the stretcher. As he was being strapped in, he pleaded, “Let me out. I have to go to the bathroom!” I motioned for the paramedics to continue, as the police had already locked up the house. And just like that Bill was off to the nearest emergency room.

I don’t know what resulted from our home intervention, as my involvement in Bill’s care ended that day. Maybe he returned home that same night. More likely, that was the end of his residing there.

When patients are discharging from the hospital they are often told, “No, you can’t go home now, but rest assured, we are sending you to an excellent interim facility, and the plan is to get you back home.” Whatever home that patient is being separated from is one we’ve never been to, and so we do not grasp the impact of their not going back. But Bill’s home was real, right in from of me.

Witnessing the point when a person separates from their home has a way of concentrating the mind: we see that the options are, in fact, quite limited. Ideally, a support system of family and home services along with follow-up by a medical team would have allowed for Bill’s return home. But it was an unlikely scenario.

Ellen and I walked across the street to her car for the trip back downtown. Several neighbors had appeared outside to investigate the commotion. Perhaps one of them had made the call to APS. Ellen handed me an unofficial-looking form to fill out. By the time we reached the hospital, I had scribbled my notes about the encounter. I placed it in the manila case folder, catching a final glance at the photo of Bill’s carpet before quickly snapping it closed. **MM**

Dan Pease is a second-year internal medicine resident at Hennepin County Medical Center.

Unanticipated souvenirs and unintended consequences

What happens after the medical missionaries leave?

By Therese Zink, M.D., M.P.H.

Photo courtesy Therese Zink



Author Therese Zink, M.D., (third from left) and colleagues in Rwanda.

Scratch, scratch. My right shoulder, back and hip itched after my return from East Africa. “They’re chigger bites,” a colleague told me. He had taught at the family medicine residency program in Rwanda, so he should know. I’d done the right things to avoid chiggers—smears DEET all over my skin, wore long pants and long-sleeved shirts, slipped my pant legs inside my thick hiking socks, even pulled on rain pants before trekking through the tall weeds. But I resigned myself to the irritating red bumps along my belt, sports bra and collar, evidence of Rwanda’s aggressive chiggers. Oh well, the hikes to see the next generations of Dian Fossey’s mountain gorillas had been worth it.

I remember being annoyed by chiggers as a farm kid, but the itch of these Rwandan chiggers was relentless. I asked a colleague to phone in a prescription of prednisone. When the sites grew to welts and oozed a clear liquid that stained my clothes, I became concerned they were infected and started antibiotics.

I have tucked international work into my life for the last 15 years during vacations, between jobs and once during a leave of absence. It is a wonderful way to do some good and see the world. I thought about doing a rotation in Africa during medical school in the 1980s, but unlike many of today’s students, I didn’t have enough of a sense of adventure to pull together the funds. Over the years, I have found that international work feeds a part of my heart that practice in the United States does not. When I talk with other health care professionals who have the foreign “bug,” they give me a knowing nod. Perhaps it is the greater need, more appreciative patients, and less paperwork and hassle that draws us to it. Getting out of the grind also brings perspective. I realize how lucky I have it here; it resets my gratitude button.

However, as my chigger bites proved, there can be unintended consequences of such trips—and not just for the volunteer. Since my first visit to a developing country, much has been published about the successes and failures of foreign aid and the unintended consequences of the work we medical volunteers do in other countries. During these “volunteer vacations,” global brigades bring medical attention and medications to hundreds of needy citizens. But what happens after they leave? We may feel proud of helping the less fortunate; but are we doing anything to address the root causes of their problems? Where do patients go after they run out of the several months of blood pressure medicine we gave them? Is the brand even available? And can they afford the next batch? What if a patient has an allergic reaction to an antibiotic or develops an ulcer from too much ibuprofen? What about the child who thinks the vitamins taste like candy and eats the entire bottle? What if our treatment didn’t yield the results we promised; where does the patient go for follow-up?

What I am trying to say is that volunteers need to be linked to the local health care infrastructure. That means meeting with local doctors or community health workers and figuring out how to extend their reach—understanding their priorities and supporting and strengthening their efforts. This requires cultivating relationships, a task that is impossible to do in one week. If the sponsoring organization has nurtured those connections appropriately, then the volunteer vacationers can partner with the local health care system.

During these short-term missions, we want to avoid the unintended consequences that do more harm than good. We should learn about the local formulary and consider purchasing medications from a pharmacy in the country, supporting the local economy. We shouldn’t provide free care if that decreases revenue for local providers. We need to strengthen the local team, document our work and leave records. And we should not burden

hospitals and clinics with unwanted donations such as outdated textbooks, expired medications or old equipment they don't know how to use or maintain.

Sometimes I've wished I was a surgeon who could fly in and perform dozens of club foot, cleft palate or eye surgeries, making a big difference in the lives of people who might otherwise never have the opportunity to have a life-altering procedure. But even these drop-in efforts have consequences. Complications inevitably arise. So in addition to performing the procedures, surgeons need to make sure they train local physicians and nurses so they are prepared to manage those complications. And they need to ensure local providers have enough supplies.

We also need to think about the unintended consequences of surgeries done in this country. The stunning efforts to repair the heart defect of a child from the developing world or separate conjoined twins often receive extensive media attention. Patients and their families are flown to the United States, the hospital and physicians donate their services, and all who participate feel good about their contributions. But what happens after the patient returns home?

I was involved in just such a case. Two years after the surgery, we visited the child and his family in rural Nicaragua. Making the trip to the village where they lived required hiring a taxi that bumped along a potholed dirt road for more than an hour. On foot, the trip would take the better part of a day. Of course, the scenery was spectacular—verdant green vegetation, a stark contrast to the Minnesota winter landscape we'd left. My colleague, the physician who'd facilitated the effort, was heartbroken to find the child doing poorly and short of breath. He had not received his heart medications for several months because his family could not afford them. My friend gave the family money to purchase the meds, but they would only last a short while.

We may celebrate our efforts in these cases, but it's worth asking whether such interventions only delay morbidity and mortality, if the dollars spent on high-cost procedures could be invested differently to provide more benefit to the community, and if our value of the health of an individual may be in conflict with the needs and values of the local community. Because of the harsh realities of poverty, purchasing a child's medications may take a back seat to buying food or a roof or a bed for grandma. The local hospital may not receive its supply of a particular medication because the country's medical budget for the year has been spent. Or the needed medication may not be on the country's formulary and, therefore, not available at the local pharmacy or hospital. It is far easier to fix the heart valve of one child than it is to build the community and health care infrastructure that will care for the child into adulthood.

We live in a messy world. Everything we do has consequences. Even my trek in Rwanda yielded unanticipated souvenirs. My misdiagnosis of chiggers became clear when a fat white worm with red spines emerged from one of the offensive lesions one Sunday afternoon three weeks after my return. I

promptly took pictures and sent them to Drs. Bill Stauffer and Pat Walker, who direct the department of medicine's Global Health Pathway at the University of Minnesota. "Bot fly larva," they confirmed. "You weren't ironing your clothes." (The heat of the iron kills the eggs the adult flies lay.)

All in all, I'd carried 11 souvenirs across the ocean. I could not reach the ones in the middle of my back, so my IM-Peds colleague, Dr. Emily Daligga, and the local nursing staff at the clinic where I work in Zumbrota got a tropical medicine lesson. Grossed out but kind to me, they removed four more of the offending creatures. Two other lesions festered for a month, so I made an appointment with the local surgeon, Dr. Tom Blee, who removed excess scar tissue. The adventure added to the assortment of scars on my middle-aged body and gave me new slides for my global health lectures.

The unintended consequence of my bot fly larva infestation was resolved with the help of modern medicine, but those of medical volunteers can be lasting. Before signing on to a medical mission, ask questions of the organization. Have they partnered with a local hospital or clinic? Are the medications they use on the local formulary? How will the effort strengthen the local health care system? Is any training of the local providers involved? What are the cultural nuances that need to be considered? Ideally, our efforts should empower and strengthen the local health care team, not compete with it. Ideally, we should do more good than harm. **MM**

Therese Zink is a professor of family medicine and director of the Global Family Medicine Pathway at the University of Minnesota.

Resources

More resources on medical missions are online at www.minnesotamedicine.com

The bot fly

Human bot flies live in tropical regions. The mature fly often lays eggs on laundry drying in the sun. The eggs enter a mammal's skin through an intermediary vector such as a mosquito. When the eggs hatch, the larva feed in the skin and drop from the host into the soil to complete the pupal stage. The larva is thought to secrete an antibiotic-like liquid that prevents infection in their host. Removing the larva usually involves smothering it, then carefully extracting it with tweezers. If the body of the larva is broken off during removal, surgery may be required.





THE PHYSICIAN ADVOCATE

The MMA's monthly report on policy, people and politics

AVERA RULING

Judge rules hospital must follow bylaws but can unilaterally change them

Eight months after filing a lawsuit, the Avera Marshall Medical Center medical staff has an answer to the question of whether the hospital must abide by the medical staff bylaws. That answer is a bit complicated, however.

In September, a Lyon County district judge in Marshall ruled that the medical staff bylaws do not constitute a contract between the staff and the hospital. This is contrary to what the medical staff, led by Steven Meister, M.D., chief of staff, and Jane Willett, D.O., chief of staff-elect, had argued in their lawsuit. However, the judge also ruled that the hospital must nevertheless follow the bylaws.

This would appear to be a victory for physicians. After all, the medical staff wants the hospital to follow the bylaws. In this respect, the medical staff officers say they feel “vindicated.”

But the judge went on to rule that the hospital’s board could unilaterally make changes to the medical staff bylaws. The bylaws had stated that changes needed to be approved by two-thirds of the voting members of the medical staff.

“The MMA is disappointed with the judge’s ruling. We believe this sets a bad precedent.”

— Robert Meiches, M.D.,
MMA CEO



In January, Steven Meister, M.D., (pictured) chief of staff, and Jane Willett, D.O., chief of staff-elect, filed suit against the Avera Marshall Medical Center.

So, the physicians both won and lost.

The end result is that the medical staff’s role in influencing patient care decisions has been weakened.

As this issue of *The Physician Advocate* went to press, the medical staff was considering whether to appeal the ruling.

“The MMA is disappointed with the judge’s ruling,” says Robert Meiches, M.D., MMA CEO. “We believe this sets a bad precedent.”

MMA IN ACTION

Happenings around the state

About the case

In November 2009, Avera Health System of South Dakota purchased the 25-bed hospital in Marshall. In May of the following year, the active medical staff (about 30 physicians), hospital administrators and the hospital's board of directors agreed that, among other things, any changes to the bylaws had to include input from the medical staff and be approved by two-thirds of the active medical staff.

However, in January 2012, the hospital's administration, with its board, developed a new set of bylaws without input from the medical staff. As required by the bylaws, the medical staff's executive committee studied the administration's changes, issued a report and then asked the medical staff to vote on the changes. A majority rejected the board's changes. They took issue with the following items:

- The new bylaws prevent the medical staff from fulfilling normal duties of medical staff leadership and self-governance, including selecting its own leaders, determining agenda items for medical staff meetings and calling medical staff meetings.
- They give the hospital the unilateral right to impose additional changes in the bylaws, even if such changes are opposed by the medical staff.
- They remove meaningful input by the medical staff in the hospital's decision-making process on matters relating to patient care.

The medical staff's executive committee had tried to work out a solution with the hospital's administration prior to filing the lawsuit.

In February, the MMA Executive Committee voted unanimously to support the medical staff, as the case could have implications for all physicians, particularly with regard to their ability to have input on quality-of-care issues.

The MMA turned to the AMA Litigation Center for support. Together, they offered an amicus or "friend of the court" brief. The intent was to provide helpful information to the court in its consideration of the issues raised by the parties. Amicus briefs are typically reserved for cases at the appellate level. However, because of the seriousness of this case, the MMA and the AMA sought to file the brief at the district court level. In April, the judge denied the MMA and AMA's request to file the brief.

The MMA will continue to follow the case.



Dave Renner

Dave Renner, MMA director of state and federal legislation, attended the Minnesota State Innovation Model Planning Meeting hosted by the Minnesota Department of Human Services in August. The meeting brought together stakeholders to discuss Minnesota's efforts to apply for grants from the Centers for Medicare and Medicaid Services for transforming the state's health system.

In early October, Renner spoke to a group of 65 University of Minnesota–Duluth medical students about the November elections and the upcoming legislative session.

In September, **Brian Strub**, MMA manager of physician outreach, attended "The Affordable Care Act," a conference hosted by the departments of emergency medicine and internal medicine at Hennepin County Medical Center.

Strub also attended two Collaborative Conversations events in Minneapolis and Duluth in early October. The sessions featured **Jan Schuerman** of the Institute for Clinical Systems Improvement, **Larry Morrissey**, M.D., and **David Luehr**, M.D. The events were sponsored by the MMA, Lake Superior Medical Society, the Range Medical Society and the Twin Cities Medical Society.

Dennis Kelly, CEO of the MMA Foundation (MMAF), attended the White Coat ceremony for incoming medical students at the University of Minnesota–Duluth in late September.

Kelly also attended an event at the University of Minnesota–Twin Cities that featured readings from *Becoming a Doctor: Reflections by Minnesota Medical*

(continued on next page)



Jan Schuerman



David Luehr, M.D.



Therese Zink, M.D., M.P.H.

MMA IN ACTION

(continued from previous page)

Students and Confessions of a Sin Eater, a new book by **Therese Zink**, M.D., M.P.H. Zink recognized the MMAF and its support for publishing the students' reflections; then she and two of the contributors to *Becoming a Doctor*,

Aaron Crosby and **Rachel Hammer**, read from the book.

Eric Dick, MMA manager of state legislative affairs, met with physicians and staff at Sanford Health's Thief River Falls Clinic in mid-



Eric Dick

September. Dick shared a recap of the 2012 legislative session and a look ahead at what issues the MMA anticipates will be at the center of the 2013 session. As part of his travels through western Minnesota, Dick interviewed legislative candidates in Park Rapids, Moorhead, Elbow Lake

and Alexandria on behalf of MEDPAC, the MMA's political action committee.

Mandy Rubenstein, MMA manager of physician outreach, attended two Resident-Fellow Section events. The first was a social event for residents, fellows



Mandy Rubenstein

and their families that took place in Minneapolis. The second taught residents and fellows about negotiating a contract and searching for practice opportunities. That event, also in Minneapolis, attracted 50 residents and fellows.

VITAL SIGNS

MMA NEWS IN REVIEW

MINNESOTA MEDICAL ASSOCIATION foundation

Helping physicians practice where they're most needed

PHYSICIAN LOAN FORGIVENESS

Six primary care physicians practicing in underserved rural/urban communities

- \$528,000 loan-forgiveness grants
- \$288,000 from MMAF since 2007
- \$240,000 matching state grants

Bringing primary care to 12,000 Minnesotans

One rural physician, Robert Jeske, M.D., is featured in this poster for the MMA Foundation's Physician Loan Forgiveness program.

Celebrate rural health November 15

The National Organization of State Offices of Rural Health has designated November 15 as National Rural Health Day in order to bring attention to the unique health care challenges that rural areas face—an aging population, a large percentage of residents with chronic conditions and many residents without health insurance. The day is also an opportunity to showcase the efforts of rural health care providers, State Offices of Rural Health and others to address those challenges.

The MMA is helping in these efforts in several ways. The MMA Foundation is working to increase the number of primary care physicians in rural Minnesota through its participation in the Minnesota Department of Health's Office of Rural Health and Primary Care's (ORHPC) Rural Loan Forgiveness Program. This past summer, the MMA Foundation and ORHPC assisted two more physicians through their Rural Physician Loan Forgiveness program, which gives new primary care physicians up to \$100,000 to help pay down educational debt in exchange for committing to practice in underserved communities in rural Minnesota for at least three years. During the past several years, the foundation has awarded financial assistance to physicians in Ortonville, Walker, Perham and Wabasha.

In addition, the MMA works with component medical societies throughout the state to help promote their events and

provides education and advocacy to rural physicians.

For more information on National Rural Health Day and how you can get involved, visit <http://celebratepowerofrural.org>. For information on the MMA Foundation go to www.mmafoundation.org.

Freedom to Breathe celebrates five years of cleaner indoor air

Five years ago on October 1, the MMA achieved one of its biggest legislative victories. It was on that day in 2007 that the Freedom to Breathe Act took effect. As a result, the state's indoor workplaces and public transportation systems became smoke-free.

"The passage of the Freedom to Breathe Act changed the culture of smoking completely," says Dan Maddox, M.D., MMA president. "As an allergist, I have patients who can now go to any restaurant in the state and not have to worry about their ability to breathe because of the presence of tobacco smoke."

The MMA first began working to eliminate smoking in workplaces in the 1970s. In 2000, the MMA officially focused its attention on restaurants and bars. Seven years later, they were able to get legislation passed with the help of several organizations: Blue Cross and Blue Shield of Minnesota, the American Lung Association of Minnesota, ClearWay Minnesota, the American Cancer Society and the Service Employees International Union.

Although there was talk early on of repealing the law, the opposition has not been able to mount a concerted effort. And the public is overwhelmingly in favor of the law. According to a 2011 survey by Blue Cross and Blue Shield of Minnesota, 79 percent of Minnesotans support the law and 86 percent believe smoke-free restaurants and bars are healthier for customers and employees.

MMA urges expansion of Medicaid

The MMA has voiced support for expanding Medicaid to people with incomes up to 133 percent of poverty, as allowed under the federal Affordable Care Act.

The MMA first made this stance known at its July Board of Trustees meeting. Then, in September the MMA urged the Access Work Group of the Governor's Health Care Reform Task Force to recommend that state leaders support it as well.

"We are asking that the work group recommend to the Legislature that it increase the Medicaid fee-for-service fee schedule on an annual basis," says Janet Silversmith, MMA director of health policy. "We'd also like to see that detailed information about managed care payment rates and trends be tracked and



disclosed by the Department of Human Services."

In its presentation to the work group, the MMA noted its growing concern regarding access to care, particularly primary care services, and made the case that the work group has not fully addressed the financial stability of physician practices and other providers serving Medicaid patients.

Minnesota's exchange is moved to new department, receives another grant

In mid-September, Gov. Mark Dayton shifted responsibility for the creation of a Minnesota-run health insurance exchange from the Department of Commerce to the Department of Management and Budget. A week later, the state received an additional \$42.5 million in federal funding to continue its development.

So it appears to be full steam ahead for the exchange. When launched later next year, it will serve as an online marketplace where individuals and small employers (those with fewer than 100 employees) can compare and purchase health insurance.

The ACA dictates that states either create their own exchanges or use a federal model. Dayton has made it clear that he favors a state-run model, although the Legislature has yet to pass any supporting legislation.

The state must make its intentions to run its own exchange known to the federal government by the middle of November.

Decisions regarding governance and financing for the exchange are still pending.

11 Minnesota hospitals receive top marks

Eleven Minnesota hospitals were among 620 in the United States that received top marks for quality and patient safety from the Joint Commission.

The designation is based on hospitals' performance during 2011 across 45 accountability measures in areas such as pneumonia care, heart-failure care and inpatient psychiatric services.

Minnesota hospitals on the list are:

- Cambridge Medical Center in Cambridge

- Fairview Southdale in Edina
- Mayo Clinic Health System in Fairmont
- Unity Hospital in Fridley
- Kanabec Hospital in Mora
- Mayo Clinic Health System in New Prague
- Fairview Northland Health Service in Princeton
- Fairview Red Wing Medical Center in Red Wing
- Regions Hospital in St. Paul
- Child and Adolescent Behavioral Health Services in Willmar
- Fairview Lakes Medical Center in Wyoming

Two metro physicians honored Two MMA members received the prestigious Charles Bolles Bolles-Rogers Award from the West Metro Medical Foundation of the Twin Cities Medical Society this fall.



Anthony Spagnolo, M.D.

They are **Joseph J. Westermeyer, M.D., Ph.D.**, an international expert on the psychiatric problems faced by refugees and returning soldiers, and **Anthony A. Spagnolo, M.D.**, a primary care physician, educator and leader.



Joseph Westermeyer, M.D., Ph.D.

Westermeyer, a professor of psychiatry at the University of Minnesota, has dedicated his work to helping soldiers returning from deployment in Iraq and Afghanistan. In addition, he has researched substance abuse and addiction and the consequences of trauma for both veterans and refugees. An active researcher, he has more than 232 peer-reviewed publications and has worked as a consultant to the World Health Organization.

Spagnolo followed his dream of becoming a physician in a small community when he moved to Shakopee in 1964—where he became the fifth doctor in town. In 1973, he co-founded the Shakopee Medical Clinic, which merged with Park Nicollet Clinic in 1985. Spagnolo, who served the Shakopee community for 48 years, retired this past summer.

The Charles Bolles Bolles-Rogers Award, established in 1951, is given to a physician in recognition of his or her professional contribution to medicine on the basis of medical research, achievement or leadership. Members of the West Metro Medical Foundation select the award recipients from nominations submitted by medical staffs of west metro-area hospitals.

2,000 Minnesota docs part of social media network

Some 2,000 Minnesota physicians are currently on Doximity, a social media network described as LinkedIn for physicians.

Doximity (www.doximity.com) allows physicians to maintain a profile; search for colleagues via specialty, location and special interests; and send HIPAA-compliant messages and attachments using a computer, tablet or smart phone.

“Doctors are mobile professionals,” said Jeff Tangney, founder and CEO of Doximity. “They go from office to clinic to hospital. Mobile devices and the power they have today are enabling all new sorts of communication.”



Doximity, which was created in 2011 by the founder of Epocrates, is now used by more than 10 percent of the nation’s physicians, according to the social network’s website.

According to a Doximity spokesperson, of the 2,000 Minnesotan physicians using the network, most are in anesthesiology, family medicine, internal medicine or pediatrics. The largest concentration of users in the state practice in Minneapolis, St. Paul and Rochester.

Physicians’ tablet use continues to rise

More and more physicians are using tablet devices to help them do their jobs. In fact, use of tablets nearly doubled between 2011 and this year, according to research released this summer by Manhattan Research, a health care market research and advisory firm.



The study also revealed that approximately 75 percent of U.S. physicians have purchased some kind of mobile device—either a tablet, smart phone or mp3 player.

Physicians are less resistant to technology than they were a few years ago, said Monique Levy, vice president of research at Manhattan Research. “It used to be that you had to solve the problems of security access, validation and data security first and then adopt,” Levy told *InformationWeek Healthcare*. “What’s happened is that the system has turned upside down. We’re now at adoption first and solve the problem later.”

Time Magazine recently reported that the University of Chicago’s internal medicine program now provides all of its incoming residents with iPads. This is a result of a pilot project conducted by the school in 2010 that showed using the Apple device improved working conditions and patient care.

In an article about the project that appeared in the *Archives of Internal Medicine*, the researchers wrote that they “found that patients got tests and treatments faster if they were cared for by iPad-equipped residents,” the magazine reported.



LEGISLATIVE REVIEW

Day at the Capitol set for 2013

Be sure to mark February 7 on your 2013 calendar. That's the date the MMA has chosen for its annual Day at the Capitol event.

For more than 20 years, the MMA has invited physicians from across the state to make the journey to St. Paul to meet with lawmakers as part of Day at the Capitol. The MMA created the event to provide physicians the opportunity to meet lawmakers in person and discuss health-related concerns they and their patients face.

"With dozens of new legislators arriving in St. Paul in January for the 2013 legislative session and a budget deficit looming, the time is now for physicians to weigh in with elected officials," says Eric Dick, MMA manager of state legislative affairs.

The day's schedule includes briefings and updates from MMA staff, remarks from key legislative and administrative officials, meetings with individual lawmakers and a late-afternoon reception for physicians.

Physicians encouraged to contact Congress regarding SGR

The MMA is calling on all Minnesota physicians to contact their U.S. senators and representatives to convince them to work toward preventing the looming Medicare physician payment cuts. The MMA sent out an action alert in early October encouraging action.

In September, the MMA joined with the AMA, 73 national health care groups and all other state medical associations in sending a letter to congressional leaders asking that both the House and Senate pass legislation this fall to eliminate the cuts.

The letter expressed concern about the "increasing level

of uncertainty in the Medicare physician payment system," specifically the 2 percent Medicare provider payment cut called for under the Budget Control Act's (BCA) sequestration provision. The sequestration provision was included in the 2011 BCA as a means of pressuring Congress to act on a deficit-reduction bill. Without Congressional agreement, automatic across-the-board cuts will take place starting in 2013.

"The combination of a sequestration cut and looming Medicare Sustainable

Growth Rate (SGR) payment cut [of 27 percent] would not only impede improvements to our health care system, it could lead to serious access to care issues for Medicare patients as well as employment reductions in medical practices," the letter states.

It went on to say: "Congress has a responsibility to ensure that sufficient funding is available to sustain adequate payment for medical services provided to our nation's seniors and disabled populations under the Medicare program."

Work continues on PPG accuracy, transparency

The 24-member Provider Peer Grouping (PPG) Advisory Committee began meeting in September to study ways to improve on legislation passed in 2008 intended to create greater transparency about cost and quality in health care.

The group was formed because initial PPG reporting proved to be less than accurate. Last year, the Legislature—working with the MMA, Minnesota Hospital Association and Department of Health—set out to improve the system. Ultimately, the group will advise the health department on how to better implement the PPG system.

Over the next several months, the committee will discuss the definition of peer groups, clinic and hospital inclusion criteria, quality composite score development, attribution and risk adjustment.

Six physicians serve on the committee, four of whom were recommended by the MMA: **Julie Anderson**, M.D., St. Cloud Medical Group; **William Davis**, M.D., Winona Health; **David Luehr**, M.D., Integrity Health Network; and **Daniel Trajano**, M.D., Park Nicollet. The other physicians participating are Larry Lee, M.D., BlueCross and BlueShield of Minnesota, and Patrick Irvine, M.D.

The health department intends to publicly release hospital-specific and clinic-specific PPG results in 2013, although firm timelines remain unclear.

VIEWPOINT

| By Dan Maddox, M.D.

A new beginning and a challenge

For much of my life, I have looked forward to the fall. The season has a special feeling because it signals the kickoff to a new academic year, with the promise of all that entails.

In addition to the excitement of new academic endeavors, I have also enjoyed the sense of new beginnings each fall brings in my professional life and within the MMA. The Annual Meeting marks the change in leadership, and a focus on new priorities and challenges that we face as an association of professionals.

“I hope that every member of the association will make it their personal goal this year to convince at least one colleague who is not currently a member to join us.”



Over the past two years, the MMA has worked hard to develop an overarching strategic plan that will provide guidance for the next several years. Termed “Focused for Success,” the plan places three priorities above all else:

- making Minnesota the healthiest state in the nation
- making Minnesota the best place to practice medicine in the nation
- advancing professionalism in medicine for Minnesota physicians.

As we move into 2013, we will work to achieve more specific goals related to these priority areas:

- improving the care of patients with complex chronic diseases that consume a large percentage of our health care resources
- expanding the primary care physician workforce
- reducing the complexity of prior authorization for prescribing medications
- promoting new and innovative payment and care delivery models
- protecting the core values of the medical profession
- finding the “common ground” that unites us all as physicians and binds us together as a profession.



Dan Maddox, M.D.
MMA President

I am both excited and honored to serve as president of your association, and I will take this opportunity to encourage all of our colleagues from around the state to engage with us in the work that we have set before us. Those who have preceded us have set the bar high, and the obstacles we face are daunting to be sure. That’s why I hope that every member of the association will make it their personal goal this year to convince at least one colleague who is not currently a member to join us.

There can be no doubt that together, we are stronger!

Achieving Accountability for Health and Health Care

By Sanne Magnan, M.D., Ph.D., Elliott Fisher, M.D., M.P.H., David Kindig, M.D., Ph.D., George Isham, M.D., M.S., Doug Wood, M.D., Mark Eustis, Carol Backstrom and Scott Leitz

■ There is no well-established mechanism at the local level to discuss or manage the balance of investments in health care and the other social determinants of health. We propose the development of voluntary regional organizations and/or use of current organizations to work with stakeholders of the health system to 1) review local data on health, experience and quality of care, and costs of care (Triple Aim); 2) create shared goals, actions and investments to meet the Triple Aim; and 3) involve citizens in local delivery system reform and stewardship of financial resources. These accountable health communities (AHCs) would contribute to co-creating a sustainable health system.

Health reform is occurring locally and nationally with an almost dizzying array of opportunities. At the federal level, the Affordable Care Act (ACA) has set in motion numerous policy reforms intended to improve health and health care including accountable care organizations (ACOs), medical homes, bundled payments, prevention strategies and hospital community benefit requirements.¹ The Center for Medicare and Medicaid Innovation is exploring and implementing many such reforms, with plans to also focus on community and population health models.² The National Quality Strategy calls for simultaneously improving population health, improving the experience of care and improving affordability by reducing the cost of quality health care.³

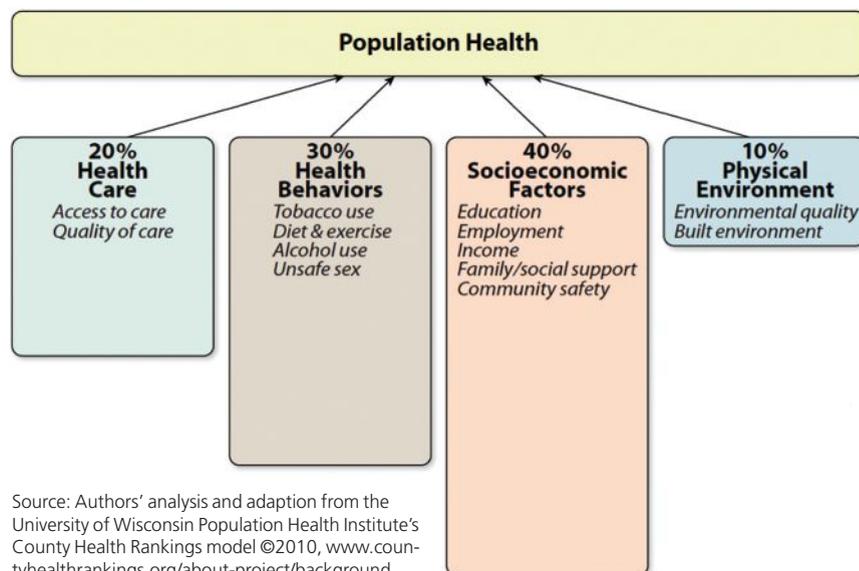
This three-part aim, known as the Triple Aim,⁴ is well-justified: As a nation, we have successfully built the most expensive health care system in the world without achieving the best outcomes. To improve population health, there is a growing recognition that we must invest more in the other modifiable social determinants of health (eg,

healthy behaviors, education, job development, housing and the environment) that collectively have a greater impact on the health of a community than access to and quality of care (Figure 1).

There is, however, no well-established mechanism at the local level to even engage in a discussion about the balance of investments in health care and the social determinants of health. Further-

more, the leaders of health care system redesigns, such as ACOs or medical homes, are often not directly linked to other stakeholders who have influence on the social determinants of health. In addition, citizens often believe that investments in more health care—and more expensive health care—must result in better health, not recognizing that rising health care costs are jeopardizing the

FIGURE 1
Social Determinants of Health



Source: Authors' analysis and adaptation from the University of Wisconsin Population Health Institute's County Health Rankings model ©2010, www.countyhealthrankings.org/about-project/background

other factors that make the population healthy.

The Institute of Medicine (IOM) report “For the Public’s Health—The Role of Measurement in Action and Accountability” describes a health system composed of public health agencies, the clinical care delivery system, the community, employers, educators, the media and other government agencies. The report develops a framework and recommendations for measurement that will provide communities and decision makers at the local and national level with relevant information on the determinants of health.⁵ Similarly, a performance evaluation framework for ACOs is being discussed that includes not only “for what, to whom and how”⁶ but also a process for evaluating the health needs of the population an ACO serves. And, importantly, tax-exempt community hospitals must now comply with the ACA’s requirement for a community health needs assessment.^{7,8}

Co-creation to Achieve the Triple Aim

To bring these important pieces of the puzzle together, we propose the creation of voluntary regional organizations that would work with local and regional stakeholders toward attaining a community-focused Triple Aim. These new organizations could be called “health outcomes trusts”⁹ and could build on existing community or regional multi-stakeholder organizations and/or initiatives. They would need to have not only the charge of the Triple Aim but also a carefully defined geographic focus, a portfolio of projects that address both population health and health care reform, and sustainable funding. Their purpose would be to build understanding of the problems and create interventions to move the focus from health care to health based on a community’s vision and goals.

Each would have the IOM-proposed stakeholders including one or more participating hospitals, local clinical care systems including ACOs, and citizens from the community. The trust would

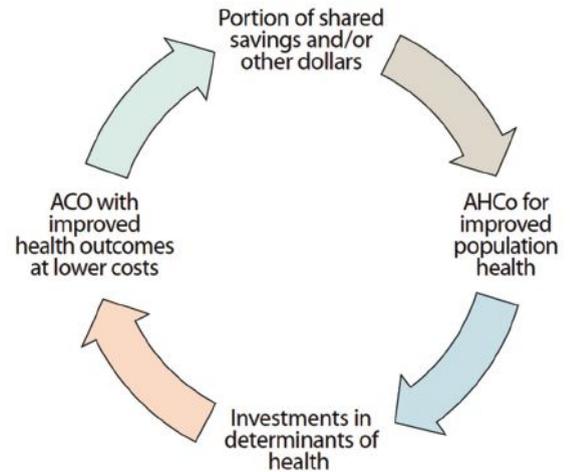
be responsible for developing plans to work across multiple stakeholder groups to invest upstream in the social determinants of health. Hospital community benefit dollars would be available for investment purposes, but other financial resources could also be used to meet community needs, including state and federal grants, refocused local philanthropy, better-aligned community benefit investments, allocation of a small share of insurance premiums, or commitment of a portion of value-based payments to demonstrated progress in population health improvement. In addition, savings generated from improved practice and performance could also be reinvested in the community, creating a reinforcing loop (Figure 2). The ReThink Health Dynamics simulation modeling from the Fannie E. Rippel Foundation illustrates the importance and feasibility of this reinforcement.¹⁰

The allocation of hospital community-benefit dollars in this systematic way could be significant. For example, McGinnis has argued that a “small, dedicated set-aside from medical care spending” could solidify partnerships between medicine and public health.¹¹

How might this work in a community? We envision three closely aligned areas of activity for the trusts. First, they would work collaboratively with local health departments and/or state health departments to evaluate measures of health and health care, such as the rankings of local communities on the social determinants of health (www.countyhealthrankings.org). Under public health accreditation processes, both local and state health departments are already responsible for using measures to make assessments. Under the ACA, there would be a synergistic opportunity for non-profit hospitals to complete these community assessments.

FIGURE 2

Community Reinvestment: A Reinforcing Loop



Source: authors’ analysis
 ACO = accountable care organization
 AHCo = accountable health community

In fact, in North Carolina, public health and hospitals have formed the NC Public Health–Hospital Collaborative, which is exploring how public health and hospitals could collaboratively conduct community health needs assessments.^{12,13} A trust would facilitate such collaboration but also expand it to include measures on quality of care such as those provided by members of the Network for Regional Healthcare Improvement (eg, MN Community Measurement and the Wisconsin Collaborative for Healthcare Quality), and on costs and affordability of health care, such as Minnesota’s initiative to create publicly reported peer-grouped measurements of clinics’ and hospitals’ risk-adjusted quality and costs¹⁴ and Massachusetts’ measures of costs of hospitals.¹⁵ Therefore, each community would have measures to review on access, quality and costs of health care; healthy behaviors; socioeconomic measures such as education, housing and job development; and the environment.

Drawing on these, the trust’s second activity would be to develop shared goals based on the Triple Aim. These goals would focus work with community stakeholders to align community policies and clinical practices as well as interventions and investments such as community-benefit dollars. For example, community

stakeholders in Mower County, Minnesota, including public health, employers and Austin Medical Center–Mayo Health System, are using original research¹⁶ and data such as the county health rankings to prioritize and identify potential interventions.

Community goal-setting could also be augmented by provider incentives to move toward “pay-for-population health,”⁹ such as Minnesota nonprofit health plans’ including measures of tobacco and obesity in their pay-for-performance or ACO contracts. This systematic approach that aligns clinical, payment and community policies as well as investments toward shared goals will be critical to directly and indirectly slowing spending growth and balancing the Triple Aim.

A third broad area of activity for the trusts would be convening conversations with citizens focused more directly on local delivery system reform, such as community involvement in the implementation of ACOs and the stewardship of financial resources. Whether or not ACOs achieve their promise will depend in large part on whether a wise balance can be struck between competition and collaboration. If local hospitals continue to compete primarily for high-margin services, the medical arms race could lead to mutually assured destruction for the populations they serve. The trusts could foster a more constructive discussion around shared aims focused on local populations’ needs.

Previous attempts to slow rising health care costs through managed care led to the perception by consumers that they were being denied needed care. With ACOs and payment reform, it will be important that we build in a much greater degree of engagement with patients and citizens that leads not just to input and feedback on services but also to a true “co-creation”^{17,18} of the future to address all parts of the Triple Aim.

Change Is Needed

The redesign of our health system is underway, with many moving parts. Because both health and health care are locally produced, we believe a key piece that’s missing is a local structure focused on the critical goal of achieving accountable health communities. A change in focus is needed—a change from more health care to more health. But it will not be easy to decrease investments in clinical care, hospitals, medical technology, etc. in order to increase investments in the social determinants of health. Local leadership and efforts will be needed to promote transparency and accountability, to bring the citizens’ and patients’ voices to the table, and to bring discipline to a medical industry that consumes more than one-sixth of our economy. Nothing less than accountability for our children’s future is at stake. **MM**

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Cents and Sensitivity

Teaching Physicians to Think about Costs

Should aspiring physicians be taught to consider the cost of the tests and treatments they will order for patients?

By Lisa Rosenbaum, M.D., and Daniela Lamas, M.D.

Imagine your first medicine rotation. You present a patient admitted overnight with cough, fever and an infiltrate on chest X-ray. After detailing a history and physical, you conclude, “This is a 70-year-old man with community-acquired pneumonia.”

Dead silence.

“Perhaps,” the attending finally says. “But what else could this be?”

Your face reddens. “Pulmonary embolism,” you say. The resident nods. “Heart failure.” Now you’re talking. “Churg–Strauss,” you add. “The patient does have a history of asthma.”

The attending smiles. “How might you investigate these other possibilities?” he asks. Next thing you know, the patient’s lined up for a chest CT, lower extremity Dopplers, echo and a rheum panel. You get honors. And so it begins.

Our profession has traditionally rewarded the broadest differential diagnosis and a patient care approach that uses resources as though they were unlimited. Good care, we believe, cannot be codified in dollar signs. But with health care costs threatening to bankrupt our country, the financial implications of medical

decision making have become part of the national conversation.

Terms like “value-based purchasing” and “pay for performance” have entered the language of the health care system. Moreover, physician organizations have joined the dialogue, most recently with the American Board of Internal Medicine Foundation’s Choosing Wisely campaign, shaped partly in response to Howard Brody’s call for “Top Five Lists” of expensive but nonbeneficial tests and treatments in each specialty.^{1,2} But this evolving conversation has yet to change the way we’re trained to practice medicine. The fact that we can no longer ignore the financial implications of our decisions leaves the medical profession in a quandary. Is there a place for principles of cost-effectiveness in medical education? Or does introducing cost into our discussions threaten to destroy what remains of the patient–physician relationship?

Many who have been in practice for decades argue that at no point, no matter the economic environment, should cost factor into physicians’ decisions. After all, this is not the first time in history when recession has loomed. Each

generation, notes Martin Samuels, chair of the department of neurology at Boston’s Brigham and Women’s Hospital, has been led to believe it’s on the precipice of doom and that unless it considers the greater good, society will unravel. But Samuels cautions that when physicians start weighing society’s needs as well as those of individual patients, they begin to lose the essence of what it means to be a doctor. When we lose our personal responsibility to individual patients, he says, “We are in deep trouble.”

Samuels is not alone. Many physicians have long endorsed the understanding encapsulated by ethicist Robert Veatch: “The ethics of the Hippocratic physician makes yes or no decisions on the basis of benefit to a single individual without taking into account what economists call alternative costs. If physicians are asked to reject such care for their patients in order to serve society, they must abandon their Hippocratic commitment.”³

Art Caplan, a bioethicist at New York University, frames the dilemma in terms of advocacy rather than costs: Can a physician remain a patient advocate while serving as a “steward” of society’s

resources? Sometimes these dual impulses are compatible; for example, patients are often delighted to learn that their statin is now generic and their costs will decrease. Everyone wins. But even when patient and societal interests don't appear to align—for example, when a patient insists on yearly mammograms starting at age 40—cost may not really be the pivotal concern. “The fight about cost is a smokescreen,” says Caplan. “What’s really at issue is the definition of ethical physician advocacy.” When interests don't overlap, “people get nervous because they think it's going to undermine the obligation and duty to put patients' interests first.”

Yet some physicians now believe that considering cost serves not only the equitable distribution of finite services, but also the real interests of individual patients. Medical bills, after all, are among the leading causes of personal bankruptcy in the United States. When Neel Shah was doing his surgery rotation in medical school, an uninsured patient in the hospital slipped and fell on her way to the bathroom. She was not presyncopal, did not hit her head and explained that she had tripped. Because the fall was unwitnessed, the resident ordered a head CT. When Shah suggested that the test was expensive and medically unnecessary, he was chided by the nurse and house staff, who retorted that cost was irrelevant. Shah realized that those around him seldom considered that their clinical decisions would translate into bills for their patients. He sees such consideration as ethically imperative.

Increasingly, others agree that thinking about cost can actually improve care. Chris Moriates, a resident at the University of California, San Francisco, has implemented a curriculum for internal medicine residents that teaches them how to do both. Through modules detailing common admission diagnoses, he emphasizes the principles of evidence-based medicine and provides information about associated costs.

In one module, a pulmonary embolism develops in a patient. House staff review

the tests the patient receives, focusing on incremental benefits and associated costs. She first undergoes CT angiography at a cost of \$3,500. Though the CT shows a pulmonary embolism, house staff subsequently order a D-dimer (\$410), fibrinogen (\$100), lower-extremity Dopplers (\$1,397), and a full hypercoagulability workup (\$2,864). The hospital bill eventually comes to \$155,698.

The focus is not on limiting expensive care, but rather on the principles of evidence-based medicine. These principles, however, are not new to medical education and have yet to change our approach to resource use. So Shah proposes an ethical framework, arguing that caring about the individual patient requires us to think about cost. That's the central theme of his nonprofit organization, Costs of Care, which has collected essays about instances in which inattention to costs has harmed patients—emulating the patient-safety movement's fruitful deployment of anecdotes about sponges left in abdomens or amputations of the wrong limb. In one essay, for example, a patient describes how a CT her physician ordered for musculoskeletal neck pain suddenly branded her with a “pre-existing condition” and caused her insurance premiums to “skyrocket.”

In 2010, Molly Cooke made a compelling argument for the profession to change its ways, asking, “How should we deal with [the] forces that have resulted in a failure of medical education to address the urgent issue of costs?”⁴ Some educators have apparently responded, and efforts at teaching cost-consciousness are gradually spreading. Cynthia D. Smith, M.D., American College of Physicians (ACP) staff, has worked with volunteers from the Alliance for Academic Internal Medicine and ACP to create a curriculum that is partially based on Moriates' modules. The impact of the curriculum will be measured by surveys and a subscore of the national in-training exam. And some educational leaders are pushing to make proficiency in “cost-consciousness and stewardship of resources” a core competency overseen by the Accreditation

Council for Graduate Medical Education.⁵

Emphasizing cost consciousness, of course, could incite a backlash from both patients and physicians. Admittedly, we, too, initially had a visceral aversion to the notion of putting price tags on our recommendations to patients. Punching numbers at a checkout counter comes to mind. “That Crestor's going to cost \$250, the lisinopril \$20, the insulin \$30, and with your insurance it looks like the insulin syringes come to \$110. Sound good?” What's the patient going to say? “I'll take the insulin but wait for the syringes to go on sale”?

On some level, the conflict between a traditional medical education and one that teaches resource-savvy care may be a matter of semantics. The real goal is not “cost consciousness” per se, but better use of evidence-based medicine and Bayesian principles. Whether it's lack of time, fear of “missing something” or simple ignorance, the incentives to do more often overwhelm our impulse to use resources wisely. Now some educational reformers are offering us an added ethical incentive. Put simply, helping a patient become well enough to climb the stairs to his apartment is meaningless if our care leaves him unable to afford that apartment. Protecting our patients from financial ruin is fundamental to doing no harm. **MM**

Lisa Rosenbaum and Daniela Lamas are editorial fellows at the *New England Journal of Medicine*.

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Palliative Care in Rural Minnesota

Findings from Stratis Health's Minnesota Rural Palliative Care Initiative

By Jane Pederson, M.D., Deb McKinley, M.P.H., Janelle Shearer, R.N., B.S.N., M.A., and Karla Weng, M.P.H.

■ Palliative medicine involves managing symptoms, controlling pain and addressing stress caused by chronic illness. It can help keep patients out of the hospital and allow them to stay in their homes and live more comfortably with their illnesses. Most palliative care programs are found in urban areas, and both national and statewide studies have found a dearth of such services in rural communities. This article describes Stratis Health's Minnesota Rural Palliative Care Initiative, which is bringing representatives from organizations within rural communities together to learn from each other how to provide palliative care services. It also highlights the efforts of organizations in four communities that are providing such care and discusses plans for evaluating these and other programs.

Caring for the whole person is the cornerstone of palliative medicine, which is the fastest-growing medical subspecialty in the United States.¹ Palliative care providers aim to relieve suffering and improve the quality of life for patients who have a serious or advanced illness and their families. They customize treatment to meet the needs of each individual and address such concerns as pain, anxiety, shortness of breath, fatigue, and nausea and loss of appetite. They also provide emotional and spiritual support for the patient and family, which is considered as important as medical treatment. In addition, palliative care providers help patients understand their treatment options and work to facilitate communication among health care professionals, patients and family members.

Palliative care is increasingly recognized as an integral part of care for people with advanced illness. A number of studies have demonstrated that patients receiving palliative care have less pain, report increased satisfaction with provider communication, and use fewer health care resources than those who do not receive such care. For those reasons, palliative care is now viewed as an approach that addresses both personal and family suffering as well as the cost of health care at the end of life.²⁻⁴

Palliative Care in Minnesota

According to a 2011 report by the National Palliative Care Research Center, Minnesota is one of seven states that received a grade of A for having more than 80% of hospitals offering palliative care services. In Minnesota, 89% of hospitals with 50 beds or more provided access to palliative care services. However, that doesn't hold in more rural parts of the state where hospitals are smaller. Only 37% of facilities with fewer than 50 beds offer palliative care services, which is higher than the national average of 23.2%.¹

Nearly half of Minnesota's 145 hospitals have 25 or fewer inpatient beds. Based on Stratis Health's experience, the state's 79 Critical Access Hospitals are even less likely than other small facilities to have a palliative care program.

The lack of palliative care services in rural areas is of particular concern, as rural populations often have a greater need for these services than urban ones. Rural Minnesota has a disproportionate and growing number of older adults. Although only 30% of Minnesota residents live in rural communities, 41% of them are older than 65 years of age. And the need for palliative care increases as people live longer and are dealing with multiple chronic illnesses.

Why is there a lack of palliative care in rural areas? Although palliative care can be offered in hospitals, clinics, long-

term care facilities and even homes, most palliative care in Minnesota is provided in the hospital setting. Urban areas are able to support hospital-based palliative care programs, as their patient volumes are large enough to allow staff to specialize in palliative medicine. The hospital-based palliative care team model, which is led by a physician or advanced practice nurse who may be trained or certified in palliative medicine, is difficult to implement in rural communities, as few physicians in greater Minnesota are trained in palliative medicine. In October 2012, eligibility requirements for physicians to become board-certified in this subspecialty were changed to require completion of a 12-month fellowship. This will likely make it more difficult for physicians in rural communities to develop expertise in palliative care and will result in an even wider gap in the availability of services between urban and rural areas in the coming years.

Bringing Palliative Care to Rural Areas

Recognizing the lack of palliative care services in rural Minnesota, Stratis Health began working with communities to develop or enhance palliative care programs in 2008. Since then, 24 communities have participated in three Stratis Health-led learning collaboratives. A total of 150 organizations have been involved, and the size of the populations served has ranged from 1,200 to 200,000.

To participate in a collaborative, a community had to have a team of individuals from multiple sites and disciplines willing to work on developing and/or enhancing palliative care services. These teams could include nurses, physicians, social workers, chaplains and others who have experience caring for people with advanced illness in a variety of settings. Participants have represented hospitals, home care organizations, hospice programs, long-term care facilities, clinics, assisted living facilities, a college department of nursing, parish nurses, clergy and public health agencies.

The first learning collaborative took place from 2008 to 2010 and involved 10 communities. By the end of that period, six were enrolling patients in a palliative care program and providing them with interdisciplinary palliative care services. The other four developed and/or improved processes around aspects of palliative care such as advanced care planning, implementation of common order sets across care settings to support effective communication during patient transitions, and providing education on palliative care to health care professionals and others in their communities.⁵ Two additional learning collaborative are still in progress.

Thus far, the participants have demonstrated that rural communities without large hospitals can provide palliative care services and that the models for service delivery can vary widely. Most of the programs they have developed are based out of home-care organizations or are led by a nurse (RN) or nurse practitioner (NP) located in a clinic or hospital. The services they provide are focused on patients in the hospital or nursing home or those receiving home care or outpatient services such

as infusion therapy. Several teams provide support by telephone and/or through visits by volunteers.

Palliative Care Models

One lesson that has come out of the learning collaborative was that no one model for palliative care services fits all rural communities. Lacking resources, participants have had to be creative, often tapping community members to provide services. Here are four examples that illustrate how communities participating in the Stratis Health initiative are doing that.

■ Cook County/Sawtooth Mountain Clinic

Care Partners of Cook County is a program of Cook County North Shore Hospital, North Shore Health Care Foundation and the Sawtooth Mountain Clinic in Grand Marais. The hospital and clinic serve a population of 5,000 (it rises to 10,000 in the summer). Because the community is too small to provide 24-hour nursing care and is too far from the nearest tertiary center, which is 110 miles away in Duluth, Medicare will not license it for hospice care. To serve patients with chronic illnesses who are nearing the end of life, a local physician trained in palliative medicine meets monthly with a nurse coordinator to discuss patient needs. Medical care is provided through county home care services and is covered by Medicare. Care Partners also has trained volunteers who provide respite for caregivers, help developing ethical wills and saying goodbye, and assistance with projects people want to finish before they pass on. Of the 30 people who have been trained, about 20 have been active as volunteers. Since it started offering palliative care services more than a year ago, Care Partners has worked with six to 10 clients.

■ Mora/Kanabec County

The community-based palliative care program housed at FirstLight Health System in Mora serves a five-county region with 34,000 residents. The team is led by a social worker and a nurse who work with home care organizations, nursing homes, spiritual caregivers and volunteers. It relies on ancillary services such as pharmacy and respiratory therapy to assist with symptom management and pain control. One of the main tenets of this program is for patients and their families to develop goals for living with chronic illness.

The program began working with its first patient in April 2011. Initially, COPD and chronic heart failure were the primary diagnoses for referrals, but patients with cancer are now taking part in the program. To date, the FirstLight program has had 19 referrals and is currently serving 12 patients. The program works with patients at no cost.

■ Essentia Health-Fosston

The Essentia Health-Fosston palliative care program is operated through Essentia Health-Fosston's home care services. It serves some 19,000 people in northwestern Minnesota. Since participating in the Stratis Health collaborative, the palliative care

program has taken a more multidisciplinary approach and now has policies and procedures in place to standardize care such as standing orders across departments and services. Social services is now providing patients with spiritual and bereavement support as well.

Essentia Health–Fosston’s work started in 2010 when they implemented health care directives in the hospital and clinic, long-term care and assisted living facilities, and home health program. The palliative care program, which started in November 2011, has served three patients.

Essentia Home Health and Hospice in Fosston also works to identify veterans who may benefit from receiving palliative care services from the Veterans Affairs system.

■ **Red Lake Band of Chippewa Indians**

The palliative care program of Red Lake Hospital serves all members of the Red Lake Band of Chippewa Indians—approximately 6,200 people. It started after an interdisciplinary team attended training at Mayo Clinic in 2009. Initially, this team included a physician who specialized in palliative medicine; nurses who worked in the hospital, clinic and community; and a pharmacist, social worker, spiritual advisor and community member. When the palliative care physician left the organization, they restructured the program.

Since then, the nursing staff has begun using a palliative care screening tool and assessment. And they are working to get all providers providing palliative care services in the hospital and at the clinic.

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Ongoing Action and Measuring Success

Stratis Health is convening a panel to provide technical advice as the collaboratives identify a set of measures for community-based palliative care services in rural communities. Ideally, the measures will assist rural communities in evaluating the effect of their palliative care programs on quality of clinical care, patient and family experience and cost. Once the measures are developed, the communities that have participated in Stratis Health’s Minnesota Rural Palliative Care Initiative will field test them over a nine-month period.

The communities participating in the learning collaboratives also have established the Rural Palliative Care Networking Group, through which they continue to discuss topics and issues related to palliative care in rural areas.

Stratis Health has developed a microsite, www.stratishealth.org/palcare, where information, resources for program development, links to national guidelines and resources, examples of action plans, descriptions of relevant quality improvement projects, and examples of clinical order sets and clinical assessment tools can be shared.

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Conclusion

Palliative care has expanded in rural areas because of the resourcefulness of providers who see the need among their

patients. Having payers and insurers, ideally Medicare, cover ancillary services such as social work, care coordination and spiritual support, which currently are not billable, would make a significant difference to the sustainability of current programs in rural communities and increase the likelihood that new ones would be created. **MM**

Jane Pederson is medical director, Deb McKinley is communications and outreach manager, and Janelle Shearer and Karla Weng are program managers with Stratis Health.

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Five Things Physicians Should Know about Physician Assistants

By Tracy Keizer, PA-C

■ Physician assistants (PAs) have become integral members of the health care team. They are expected to play an even larger role as health care delivery evolves. This article highlights some of the facts physicians should know about PAs and the role they play in the health care system.

Physician assistants (PAs) have been practicing in Minnesota since the 1970s. They were officially registered in 1987 through the Board of Medical Practice. In 2009, state legislation was passed to change PA registration to licensure. According to the 2010 American Academy of Physician Assistants (AAPA) census, nearly 84,000 PAs are practicing in the United States and more than 2,100 of them are in Minnesota.¹ Currently, 39% percent of Minnesota PAs are practicing in primary care, 28% are in medical specialties, 5% are in general surgery and 28% are in surgical subspecialties. Forty-two percent work in outpatient group or solo practices, 29% in inpatient settings, 3% in rural clinics, 2% in community health centers and 1% in Federally Qualified Health Centers. Another 23% percent work in other settings such as retail outlets, nursing homes and correctional facilities. The United States has 164 accredited PA schools that graduate nearly 6,000 new PAs each year.² The AAPA projects that by 2020, there will be between 137,000 and 173,000 certified PAs in the country.

Working under the supervision of a physician, PAs are responsible for the routine care of patients, allowing physicians to concentrate on more complex cases. Here are five things physicians should know about the training PAs receive and the role they can play in medical practice.

1. PAs are trained in the medical model. Applicants to PA programs must have completed at least two years of college courses in basic science and behavioral science. However, the majority of students enter their PA training with a four-year degree and prior experience in public health, nursing or other health-related fields. Physician assistant programs average 27 months in length, and they include both didactic and clinical training. Most are master's-level programs. Students complete 2,000 hours of supervised clinical practice prior to graduation.³

Currently, there are three accredited PA training programs in and around Minnesota: at Augsburg College in Minneapolis, the College of St. Catherine in St. Paul, and the University of Wisconsin-LaCrosse, which is affiliated with the Mayo

Clinic. A program at Bethel University in Arden Hills is awaiting accreditation.

Minnesota also has two post-graduate training opportunities or residencies for PAs in the Twin Cities. One is in emergency medicine and the other is in psychiatry. Both are located at Regions Hospital in St. Paul. The psychiatry training program was started in 2008 in response to concern about lack of access to mental health services. The 12-month program accepts two to four applicants per year. The PAs train in both inpatient and outpatient areas; in addition, they take inpatient call duty and perform house officer duties. The emergency medicine post-graduate training program is an 18-month program that started in 2012 and accepts two post-graduate PAs per year. Participants undergo didactic and clinical training in emergency care with a focus on critical care.

2. The supervising physician helps determine a PA's role. According to the American Medical Association's guidelines for physician-PA team practice, supervising physicians assume responsibility for the care provided by the PA. Minnesota's PA practice statute is based on those national guidelines.⁴ Although the physician does not have to be present when the PA provides care, the supervising physician (or a designated alternate) must be available by telephone or other means.⁵

The PA's scope of practice is defined by state law (Minnesota Statute 147A.09). Minnesota law allows physicians broad delegation authority: PAs can perform physical exams, diagnose and treat illnesses, order and interpret tests, counsel and educate patients, perform procedures, do research, assist in surgery and write prescriptions. (In Minnesota, PAs have had delegated prescriptive authority since 1990.) A PA's education and training, the supervising physicians' practice and the policies of the facility in which they work all play a role in determining a PA's duties.

3. Increasingly, PAs are specializing. For many years, most PA graduates went into primary care. However, the number of PAs taking primary care positions after graduation has been declining. In a May 2010 *Health Affairs* article on PA career flexibility, the authors noted that approximately 50%

of graduating PAs went into primary care in 2000, and in 2010, approximately 31% chose primary care positions.

In addition, it's not unusual for PAs to specialize in mid-career. In that same article, Roderick Hooker and colleagues researched AAPA data and concluded that 49% of all clinically active PAs changed specialties at some point during their careers.⁶ The majority of PAs who do transition to other specialties do so by learning new skills on the job and through continuing medical education. Some participate in post-graduate training programs such as the ones offered at Regions Hospital.

Higher salaries for PAs who specialize may be the main reason fewer are entering or staying in primary care than in the past. According to the 2010 AAPA salary report, the average salary for a PA in primary care was \$90,000 per year; those who specialized in orthopedics earned an average of \$95,000 and those in internal medicine averaged \$106,000 per year.⁷ Twelve PA programs in the United States have applied for and received a U.S. Health and Human Services grant to support educators and educational programs that focus on primary care.⁸ In addition, the Minnesota state loan repayment program provides an incentive for PAs to practice in primary care. It offers full-time PAs up to \$20,000 annually in exchange for two years of primary care service in a federally designated Health Professional Shortage Area.⁹

4. PAs can do some of the work medical residents once did. As a result of the duty-hour restrictions imposed by the Accreditation Council for Graduate Medical Education, medical residents now work fewer hours than they once did. PAs are taking on some of the work residents did in both inpatient and outpatient settings. For example, PAs are now serving as overnight house officers in hospitals. They are also serving as first assistants in surgery, seeing patients for follow up treatment and performing pre-operative assessments. Both Hennepin County Medical Center and Regions Hospital use PAs to do some of the work once performed by residents.

5. PAs can increase a clinic's productivity. Minnesota law allows a physician to supervise up to five PAs.⁴ By having PAs on staff, a clinic can exponentially increase the number of patients it serves. PAs respond to patient inquiries, educate and counsel patients, and work with patients to manage chronic diseases. This allows physicians to devote more time to patients who have complex medical problems, need highly acute care or have difficult-to-treat conditions. Medicare pays for medical and surgical services provided by PAs at 85% of the physician fee.¹⁰ This rate applies to all practice settings including hospitals, nursing facilities, homes, offices and clinics. And it applies to inpatient, outpatient and emergency care.

An AMA report that looked at the effect of PAs on the productivity of solo physician practices noted that those employing nonphysician practitioners saw increases in the number of office visits per hour, both on a weekly and yearly basis, thus resulting in increased net income.¹¹ Medical Group Management Association (MGMA) studies have also demonstrated that employing PAs is cost-effective. According to 2009 MGMA data, PAs in

family medicine handle approximately 42% of ambulatory encounters with patients each year while physicians handle the remaining 58%. Comparing relative value units, indicators of time and skill used for Medicare reimbursement, PAs in family medicine have almost as many RVUs as family physicians (48% versus 52%). These numbers suggest that hiring a PA could be the equivalent of adding 0.73 to 0.96 of a full-time family physician.¹²

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Conclusion

Physician assistants are already playing an important role on many health care teams in Minnesota. They will likely play an even bigger one in the future as our health care system evolves and team-based care becomes even more the norm. Physicians should understand that PAs are trained in the medical model, are committed to the concept of team practice and can provide cost-effective, high-quality care as integral members of physician-led teams. **MM**

Tracy Keizer is president of the Minnesota Academy of Physician Assistants.

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Latent Tuberculosis Infection Screening in Minnesota's Critical Access Hospitals

By Daniel Stahl, M.D.

■ The prevalence of tuberculosis (TB) declined worldwide during most of the 20th century. However, between 1980 and 1990, the incidence rate rose. Subsequently, the United States, through the Centers for Disease Control and Prevention (CDC), and the United Nations increased efforts to control TB and reduce its burden on population health. One of those efforts has been offering guidance about screening health care workers. This article reports on the findings of an investigation into whether Critical Access Hospitals in Minnesota are following the CDC guidelines for screening and treatment for latent tuberculosis infection. Among the findings, 97% of the hospitals used the two-step tuberculosis skin test (TST) as their baseline test, 29% screened only on hire and 71% screened annually. Our study also found many hospitals do not follow CDC recommendations for TST administration or interpretation, nor do all hospitals refer individuals with positive test results for treatment.

Tuberculosis is a significant contributor to morbidity and mortality worldwide. The disease is transmitted through tiny droplets containing *Mycobacterium tuberculosis*. Some who are exposed to the bacteria will become infected and develop active disease. Others will not. And some will have latent infection that may or may not turn into active disease.

Clinical tuberculosis (TB) and latent tuberculosis infection (LTBI) are diagnosed when an individual has a positive tuberculosis skin test (TST) or interferon-gamma release assay (IGRA). Other signs that TB may be present include an abnormal chest X-ray or CT scan and clinical evidence such as fever, night sweats, cough, weight loss and hemoptysis. The TST has been the standard for diagnosing LTBI for the past 100 years. Persons with a positive TST have a 10% chance of developing active TB over their lifetime. The TST is not perfect, as it has low specificity, and many positive skin tests are determined to be false-positive after extensive investigation.¹ The blood assays for TB—IGRAs—offer improved specificity, and many facilities are using these tests, especially for persons who have received the BCG vaccine.²⁻⁴ The predictive value for disease development has not been fully established for the IGRAs.^{5,6}

Incidence rates for TB are monitored by the World Health Organization (WHO). Current estimates in 2010 put the case rate in Africa at 332 per 100,000 population as compared with 36 per 100,000 population in the Americas.⁷ The

United States has been monitoring active TB cases since the 1950s, and the incidence rate of the disease has declined from 52 cases per 100,000 population in 1953 to 3.6 cases per 100,000 population in 2010.⁸ Significant differences in incidence rates exist between native and foreign-born individuals. Approximately 40% of cases in the United States occur in the U.S.-born population, while 60% occur in foreign-born persons. These percentages have held steady since 1993.⁹

In 2009, 61% of Minnesota's TB cases occurred in Hennepin and Ramsey counties; an additional 18% occurred in five other metro counties, and 5% were found in Olmsted County. Fifty-eight of Minnesota's 87 counties have Critical Access Hospitals (CAHs), a federal designation for rural community hospitals that allows them to receive cost-based reimbursement from Medicare. Only nine of the 58 counties had any reported cases of TB in 2009 (six counties had one case, two had two cases, and one had four cases). Of the 161 cases that occurred in Minnesota during 2009, only 14 (8.1% of total cases) were found in the 58 counties with CAHs.¹⁰

The resurgence of TB in the 1980s in the United States renewed interest in disease surveillance and control. As a result, the Centers for Diseases Control and Prevention (CDC) updated its guidelines for surveillance of health care workers in 1994 and again in 2005 to reflect changes in the epidemiology of TB. A 2005 *Morbidity and Mortality Weekly Report (MMWR)* spells out clearly how health care organizations should screen for TB among their staff (see p. 48).¹¹ Hospitals

in Minnesota, including CAHs, should be following the CDC guidelines for screening health care workers for TB.

In 2009, an unusually high number of positive TST results were noticed at one CAH, where each staff member was screened annually for LTBI, which is contrary to CDC recommendations. Learning that there were a high number of false-positive results prompted the author, with the help of the Minnesota Department of Health, to look into whether CAHs in Minnesota were aware of and following published CDC guidelines.

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Methods

We sent each of the 79 CAHs in Minnesota an invitation to participate in a confidential survey regarding their employee screening process for LTBI. Those that agreed to participate were sent surveys either in the mail or by email.

Questions in the survey were based on the guidelines and risk assessment section published in Appendix B of the CDC's 2005 *MMWR*.¹¹ The hospitals were asked about the community they served and their workforce. They were also asked about the frequency of screening for LTBI and whether clinical and/or nonclinical staff members were tested. The survey also looked at various administrative, environmental and personal protection controls and policies for the detection of LTBI and the prevention of active TB transmission. Each hospital was also queried about the level of risk for TB in the facility and in the community and its success with infection control.

Because active TB is uncommon in the United States, and especially in rural counties where CAHs are located, we included one question aimed at assessing how perception of risk affected the hospital's TB screening program.

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Results

Fifty-nine CAHs returned the completed questionnaire. These hospitals were located in 46 of the 87 counties in Minnesota and represented 74.7% of the CAHs in the state. Responses were de-identified to maintain confidentiality (Table).

Each hospital that responded stated that it had a TB screening program in place. Fifty sites (85% of the hospitals) reported doing a yearly review, whereas nine (15%) had not updated their policies in the past year. Fifty-four sites (91.5%) used the CDC recommendations. Two (3.4%) did not know what their screening guidelines were based on.

Fifty-seven sites (96.7% of the CAHs) screened their staff upon hire using the two-step TST. Two used the BAMT/IGRA in addition to the two-step TST. Seventeen (29%) of the hospitals screen for TB only upon hire. The other 41 sites (71%) screen annually.

Fifty-five (93%) of the hospitals correctly reported their local incidence rate of TB; four (6.8%) of the sites did not know their incidence rate or the rates they reported did not accurately reflect existing Minnesota Department of Health data. All of the hospitals with 200 or more staff members classified

Tuberculosis Screening in Health Care Institutions

The Centers for Disease Control and Prevention's (CDC) 2005 guidelines recommend that a site identify which health care workers should be included in a screening program (especially those who share air space and have prolonged contact with persons with infectious TB, and those who have risk factors such as chronic medical conditions or who come from countries with a high prevalence rate of TB).¹ Screening is typically encouraged for clinical staff only using the two-step TST or one of the IGRAs. The CDC also recommends training for staff that perform screenings, although some studies demonstrate reliability among different readers and others do not.²⁻⁵

Each site must assess its level of risk based on several factors. The first is the TB incidence for the surrounding county. Second is the case load of the hospital and the number of TB patients a hospital will see in a year. These factors allow a facility to classify its risk as low, moderate or ongoing transmission. Based on the risk level, it is recommended that each setting screen its health care workers upon hire and/or annually.

Hospitals are advised to have three things in place in order to identify and protect staff from active disease: a written TB plan that is updated annually; precautions to prevent TB from spreading such as airborne infection isolation (All) rooms, high-efficiency particulate air filters, or ultraviolet filtration systems in addition to general ventilation; a policy that care team members be fitted with masks to use when in direct contact with patients with active TB.

The TB infection-control plan should allow the site to quickly identify and manage active disease, conduct evaluations of TB cases, and investigate with the help of local and state health departments. It should be updated annually. A key component of a screening program is arranging for or coordinating latent tuberculosis infection (LTBI) treatment. Workers should be given the opportunity to begin treatment for LTBI; direct-observed therapy should be considered with the help of local health departments, as many who undergo treatment will not complete the full course.⁶

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themselves as being at low risk for TB, according to the CDC guidelines. Three of the smaller hospitals did not know their risk level and one classified itself as medium-risk. None identified themselves as having an ongoing transmission risk.

Fifty-one of the responding hospitals required a physician consultation for a positive TB test; the consultation consisted of a history and physical exam. Fifty-four of the sites required a chest radiograph, but only three performed bacterial studies

TABLE

TB Screening and Treatment in Minnesota's Critical Access Hospitals—Survey Results

	N	%
Number of CAHs completing surveys	59	74.70
Know their local TB rate	55	93.22
Do not know the local TB rate	4	6.78
Encounter active/suspect TB	25	42.37
Do not encounter active/suspect TB	30	50.85
Unknown if TB is encountered	4	6.78
Low risk as described by CDC	55	93.22
Medium risk as described by CDC	1	1.69
Ongoing risk as described by CDC	0	0.00
Unknown risk level	3	5.08
Written TB plan in place	59	100.00
Screen all staff members	55	93.22
Screen only clinical staff members	4	6.78
CDC guidelines used as basis for policy	54	91.53
Practitioner or other used to guide policy	11	18.64
Unknown what guided policy	2	3.39
Baseline use of two-step TST	57	96.61
Baseline use of one-step TST	2	3.39
Baseline BAMT	2	3.39
Baseline symptom score	29	49.15
Screen on hire only*	17	29.31
Screen on hire and routinely*	41	70.69
Only trained readers allowed to interpret TST	17	28.81
Self-reporting allowed	3	5.08
Only general ventilation	5	8.47
HEPA or UV filtration rooms	38	64.41
Airborne infection isolation rooms	41	69.49

*Hospitals classified as moderate risk removed from this group

using sputum. Forty-seven of the sites required both a physician consultation and a chest radiograph. Twelve of the hospitals offered only one of the three recommended studies necessary for a complete evaluation. Only 15 of the hospitals indicated that they provide treatment for LTBI for employees with a positive TST. Of the hospitals that did not provide the recommended history, physical evaluation and chest X-ray, none offered treatment for LTBI.

Ninety-three percent of hospitals indicated that they screened both clinical and nonclinical employees. One stated that all staff members who have patient contact, which is essentially every staff member, received the TST. Only four sites specifically targeted clinical staff. There was no correlation between the size of the staff and whether a site screened only at hire or routinely ($P=0.29$).

During the 12 months preceding the survey, 20 hospitals (33%) reported having positive TST responses. One hospital had eight positive skin tests. The others reported one or two positive results. The size of the hospital had nothing to do with the likelihood of having positive conversions ($P=0.12$) nor did the decision to screen only upon hire rather than yearly ($P=0.33$).

All of the hospitals had a written TB plan in place, all of them had environmental controls designed to reduce the likelihood of transmission and 57 had written personal protection policies in place. Five of the sites relied solely on general ventilation for environmental control. Thirty-eight had HEPA or ultraviolet filtration, and 41 had AII rooms. Neither the size of the hospital staff ($P=0.18$) nor the hospital being public or not-for-profit ($P=0.48$) had any relationship with a facility's use of more than general ventilation. However, hospitals that did have exposure to patients with active or suspected tuberculosis as inpatients, outpatients or in the emergency department more often had additional environmental protective measures in place.

Discussion

For the most part, CAHs in Minnesota are following CDC recommendations for screening staff for LTBI. The majority of CAHs surveyed knew their local TB incidence rate and appropriately classified themselves as being low-risk. Each hospital had a written TB plan in place and most updated the document each year. Hospitals were also highly likely to have environmental and personal protection plans in place. Despite having the CDC guidelines in place, hospitals that considered themselves low-risk frequently screened too many staff members, typically their entire staff, and screened them too often. According to survey comments, they justify their high rate of staff screening as not being costly because of their small size and because most, if not all, employees have a potential for patient exposure.

Administration and interpretation of the TST was not performed according to CDC standards at many facilities. The CDC advises that the skin test should only be examined by highly skilled and trained staff. No specific training was required of physicians, nurses and other staff who read skin tests at many

of the sites. Because of the subjective nature of interpreting the TST, there is an increased chance of false-positive and false-negative results. As sites perform fewer TSTs, having dedicated staff to interpret the results will help maintain competency and improve accuracy.

Although many hospitals have a policy for TST testing in place, only a minority of facilities linked their testing to treatment for LTBI. Some staff members correctly knew that LTBI treatment should be offered to workers who tested positive. But hospitals need to ensure that they both identify and treat LTBI.

Conclusion

In summary, protocols for TB screening in Minnesota's CAHs varied. Most of the CAHs that responded to our survey should consider relaxing their screening programs to fit with CDC recommendations. Screening is most effective when performed on individuals at increased risk and can be useful for disease reduction. The state's CAHs are located in communities at low risk for TB. Therefore, they should only screen employees upon hire and cease performing subsequent routine TSTs or IGRAs for their entire staff. **MM**

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Winners of the 2012 American Academy of Pediatrics Minnesota Poster Competition

Each year, the state chapters of the American Academy of Pediatrics invite medical students and residents to take part in a scientific poster competition. Residents and students submitted posters for consideration at the Minnesota chapter's annual meeting in Bloomington in June. The state's two pediatric training programs, the University of Minnesota's and the Mayo Clinic's, were well-represented with submissions in the clinical vignette, research and medical student categories. A People's Choice award was also selected by popular vote.

Posters were judged by practicing pediatricians, pediatricians from the state's academic medical centers and the participants' peers. The judges examined each entry for clinical relevance, originality, and written and visual presentation in "poster rounds" sessions. Special thanks to Andrew Olson, M.D., a medicine-pediatrics resident at the University of Minnesota, for coordinating the competition.

The winners presented their posters at the American Academy of Pediatrics annual meeting in New Orleans in October. Congratulations to all who entered for their excellent work.

■ Clinical Vignette Winner

Virilization in a 6-year-old Girl: A Presentation of Adrenocortical Carcinoma

By Katie Satrom, M.D., Joseph Neglia, M.D., M.P.H., and Brandon Nathan, M.D.

Adrenal tumors, both benign and malignant, are very rare in children. It is important to recognize malignant tumors, in particular adrenal cortical carcinoma (ACC), early while surgically accessible. Fourteen new cases of ACC are diagnosed in children in the United States each year. The highest incidence of ACC occurs in southern Brazil, where the majority of cases are associated with a germline p53 mutation. Most ACCs are functional tumors, presenting most often with virilization, and less often as Cushing syndrome, hyperaldosteronism or a combination of endocrine effects.

Case Report: We saw a 6-year-old previously healthy female who presented with five months of deepened voice, development of pubic and axillary hair, and growth acceleration. Physical exam was significant for a large right-sided abdominal mass, tanner stage 3 pubic and axillary hair, baritone voice, clitoromegaly and hypertension. CT scan showed a very large, heterogeneous adrenal tumor, measuring approximately 23 cm x 17 cm x 17 cm, with associated pulmonary nodules and two hepatic lesions. Endocrine work-up revealed high levels of androgen hormones and non-suppressible cortisol levels. Bone age was consistent with pubertal age. Biopsy confirmed a diagnosis of adrenal cortical neoplasm. The tumor was estimated to weigh more than 400 g, measured greater than 10.5 cm, and had confluent necrosis, brisk mitotic activity and atypical mitotic figures. Family history

was significant for the mother having a history of childhood ALL and multiply recurrent osteosarcoma. p53 gene mutation sequencing was performed, and our patient was found to be a heterozygote for the mutation. This finding provides molecular confirmation for the diagnosis of Li-Fraumeni syndrome. The patient was enrolled in the Children's Oncology Group study ARAR0332 and was started on chemotherapy including etoposide, cisplatin, doxorubicin and mitotane. Mitotane is a drug that inhibits steroid synthesis. After two cycles of chemotherapy, the patient will be evaluated for possible surgical resection of the tumor depending on its size.

Conclusion: Unusual endocrine manifestations in children including precocious puberty, virilization or Cushingoid features should raise suspicion of malignancy and warrant extensive work-up. Growth chart trends are a

good screening tool to use in evaluating for precocious puberty or exogenous hormone production. Early detection of adrenal tumors is important, as advanced disease carries a poor prognosis. Families with multiple malignancies or the presence of rare tumors should be considered for familial cancer syndromes.

■ Research Winner

Parental Exposures in Hepatoblastoma: The HOPE Study

By Jessica Liegel, M.D., and Logan Spector, Ph.D.

Hepatoblastoma (HB) is a rare pediatric liver tumor with an incidence of 1.5 million, which doubled between 1975 and 1999 in the United States. Recent evidence suggests increased risk of HB in children born with low birth weight (LBW) (1,500 to 2,500 g) and especially those with very low birth weight (VLBW) (<1,500 g). Survival of these infants with VLBW in the United States has improved significantly during the same time period the incidence rate of HB has been on the rise.

The etiology of hepatoblastoma remains largely unknown, and the HOPE study is the largest and most comprehensive case-control study of hepatoblastoma to date. It was designed to investigate possible causes, including environmental exposures, specific to prematurity. A previous Children’s Cancer Study Group analysis showed an increased risk with exposure to metals, petroleum, paints and pigments thus this subanalysis focuses on parental occupational exposures during pregnancy and development of HB among children born with both LBW and normal birth weight.

Methods: Six hundred cases of HB diagnosed at U.S. Children’s Oncology Group institutions between 2000 and 2008 have been identified, about 120 of which involve infants with LBW and VLBW. Controls have been selected from United States birth registries and were frequency matched on birth weight, sex,

year of birth and region of diagnosis. Exposure data were collected through parental interviews (which included a query on possible exposures to certain fumes and chemicals), medical records and DNA analysis of buccal cells; tumor tissue also was collected. Occupations were coded according to the Standard Occupation Classification and linked with possible exposure to paints, gas, plastics, welding, solder, other fumes or other chemicals. Data analysis was performed using SAS 9.3. Unconditional logistic regression was used to analyze risk factors as this was the preferred method for frequency-matched data allowing for adjustment to the variables that are matched.

Results: After controlling for birth weight, multiple births, maternal smoking, maternal education and maternal race, preliminary data show a slight but statistically significant increased risk of hepatoblastoma for children whose fathers had an occupation that exposed them to welding, paints and unspecified fumes or chemicals. There was no increased risk in children whose mothers had any occupational exposures.

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■ Medical Student Winner

Familial LCAT Deficiency in a Child with Nephrotic Syndrome

By James Mapellentz MS4, Jurat Rajpal, M.D., Alejandra Decanini Mancera, M.D., Robyn Reed, M.D., Ph.D., Youngki Kim, M.D., and Blanche Chavers, M.D.

SC., a 15-year-old female, presented to urgent care with lower extremity swelling and morning facial edema that had progressed for six months. Urgent care findings included newly discovered hypertension (167/95 mm Hg), proteinuria and microscopic hematuria. She was admitted to nephrology for assessment and treatment. Her past medical history was significant only for a lack of any medical care since early childhood. Family and social history included residence in a Mennonite community and parents who were third cousins. She had no family history of renal disease. Both parents were previously found to be carriers of medium chain acyl-coA dehydrogenase deficiency when all members of their Mennonite community were tested following one member’s diagnosis. On exam, she had bilateral lower extremity pitting edema, and facial and hand swelling. Laboratory data was notable for hypoalbuminemia, hyperphosphatemia and a normal creatinine. Urine analysis showed large blood with 28 WBC/hpf and 64 RBC/hpf. Urine protein:creatinine ratio was 14.9. ANA was negative, and C3 and C4 were normal. Serum cholesterol was 240mg/dL, HDL 29mg/dL, and triglycerides 540mg/dL. Renal ultrasound was notable for a stone in the superior pole of the left kidney and punctate calcifications in the medulla bilaterally suggestive of medullary sponge kidney. Echocardiogram showed mild left ventricular wall thickness with normal contractility. A percutaneous renal biopsy was performed. Light microscopy showed mesangiolyis and glomerular basement membrane (GBM) irregularities. Specifically, the GBM had a honeycomb-like lucency and splitting with deposition of hyaline in the capillary loops and media of several arterioles. The

cortical tubules also appeared enlarged. Immunofluorescence showed no evidence of immune complex deposition. Diffuse and global ragged thick linear staining of the GBM with segmental honeycomb appearance was noted. Phase contrast microscopy localized the honeycomb appearance to either the subendothelial or intramembranous areas of the glomerular capillary wall. Oil Red O stain on frozen kidney tissue showed fine lipid droplets within cells in the capillary loops of the glomeruli. On electron microscopy, the GBM was abnormally thickened with discrete round inclusions of electron-dense lamellar material inside the lamina densa. The findings from electron microscopy were suggestive of a disorder of metabolism. Ophthalmology examination revealed bilateral corneal haze and an arcus. Results from enzyme activity testing were: total cholesterol = 163 mg/dL (desirable <170 mg/dL), cholesterol esters = 16% (60 to 80% of total cholesterol), phospholipids = 321mg/dL (155 to 275 mg/dL), 16:0 lysophosphatidylcholine = 63 mcmol/L (\geq 62 mcmol/L), 18:0 lysophosphatidylcholine = 22 mcmol/L (\geq 20 mcmol/L), HDL cholesterol = 4mg/dL and triglyceride concentration = 220 mg/dL (155 to 275 mg/dL).

Based on these findings, a diagnosis of lecithin-cholesterol acyltransferase (LCAT) deficiency was made. Multiple mutations in the LCAT gene have been described resulting in two rare autosomal recessive disorders: familial LCAT deficiency (FLD) or fish-eye disease (FED). There are similarities in the symptomatology between the two; however, FLD patients tend to have a more severe deficiency of LCAT. The abnormalities in lipoprotein particles correspond to the clinical manifestations of renal insufficiency, corneal deposits, arcus corneae and hemolytic anemia.

■ People's Choice Winner

Failure to Thrive Secondary to Hypercalcemia from Vitamin D Toxicity

By Adam Foss, M.D., Taj Mustapha, M.D., and Kyriakie Sarafoglou, M.D.

A 7-month-old male presented from his primary care provider for further evaluation of failure to thrive, constipation and emesis. He was found to have an elevated calcium level of 16.0 mg/dL. Upon admission, the patient's calcium was found to be 14.4 mg/dL with ionized calcium of 7.7 mg/dL. His growth was found to be restricted with weight and head circumference below the first percentile. The patient had a twin brother who was not demonstrating failure to thrive and had normal growth percentiles. Upon elucidating further history, it was determined that the patient was getting 600,000 IU per week of vitamin D supplement and had received a total of 7.8 million IU of vitamin D. His vitamin D levels returned with 25 OH vitamin D2 elevated at 391 μ g/dL. Calcium levels were unable to be corrected by hydration alone. In this particular case, because of the excessive amount of vitamin D ingested and the persistently elevated calcium, pamidronate was given intravenously with dramatic improvement in calcium levels. Hypercalcemia is relatively rare in the pediatric population and has several genetic, organic and exogenous causes, including vitamin D toxicity. Measurement of vitamin D levels assessing for vitamin D deficiency has become commonplace in the primary care clinic. Although it is clear that the patient was receiving an excessive amount of vitamin D supplementation, it highlights the importance of clear communication with patients who are on vitamin D supplementation. **MM**



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What specialty are you interested in?

The burning question every medical student is asked

By Oludare A. Odumade

As I do the first day of every clerkship rotation, I stumble around looking for my assigned preceptor. When I find him or her, I set down my backpack and nervously introduce myself, “Hi, my name is Dare Odumade, and I will be your medical student for the day.”

They usually ask, “What year are you? What medical school are you attending?” Then comes the question that makes me feel as if someone is scratching on a blackboard: “What specialty are you interested in?”

Not again, I think. Should I pretend I am interested in family medicine? If I do say I am, how will I explain how I will incorporate my research interests?

One’s field of interest is inevitable fodder for conversation, as it in part helps define who you are as a person. I used to say “internal medicine” when asked what I wanted to specialize in, but that was three rotations ago. Maybe I struggle with this because I don’t know; I still have over a year of medical school left. I feel like I am being asked to make a judgment about something I have not fully investigated. I also wonder whether I will be treated more favorably if I show interest in the specialty of the physician who is asking the question.

During my first clerkship in general surgery, I told the staff physicians that I was not interested in surgery as a career. In the weeks that followed, I felt distance and disinterest from the residents and attendings. It wasn’t until halfway through that rotation, when I stayed late to watch a bilateral mastectomy, that I felt as if someone wanted to teach me. And I think that was just because he loved teaching.

After that rotation, I changed how I responded. Obstetrics and gynecology wasn’t a rotation I would have selected if given the choice, but on the first day, when I was asked “the question,” I told my preceptor I was keeping my mind open. What I was thinking was, I’m keeping my mind open to everything

except surgery and OB/GYN. But I acted interested, trying to anticipate the needs of the staff and take advantage of the learning opportunities. Before I knew it, I was no longer acting. I was interested. Staff gave me extra attention. Instead of letting me get extra sleep on call nights, as they did for a few students, they kept me in the know about who was close to delivering and who might need an emergent cesarean. I began to wonder: Was my mindset actually different or did the staff and residents treat me differently? Or did I just perceive that I was being treated differently? Honestly, I don’t know. And I realize now that it doesn’t matter. Clerkship rotations should be for learning.

So on my first day of my family medicine clerkship, I was able to reply truthfully when asked “the question.” “Yes, I am interested in what family medicine has to offer,” I told my preceptor. But I wondered about my colleagues. Were they getting short-changed depending on their answer? Were they short-changing themselves by not giving themselves over to the learning process? If I could advise my fellow medical students, here’s what I’d say: Be interested in all that medicine has to offer while you are a student. Treat every day as if you are in an apprenticeship for your future profession. Take clinical pearls from each clerkship rotation and add them to your skill set. Whether you go into family medicine or an extremely specialized field, these experiences are valuable. There is no need to pretend you are interested. Just be interested. **MM**

Oludare Odumade is a fourth-year medical student at the University of Minnesota Medical School.

Special thanks to Therese Zink, M.D., M.P.H., a professor in the department of family medicine and community health at the University of Minnesota, for critical review of this essay.