

MEDICINE

STORIES FROM A STRUGGLING ECONOMY

Tseganesh Selameab, M.D.,
and other physicians on the
fallout of the recession

ALSO INSIDE:

Hospitals
Feel the Pinch

Physicians' Role
in Spending

Improving Health
of the Homeless



MINNESOTA
MEDICAL
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FEBRUARY 2012

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Photo by Scott Walker

For many, the recession became not just a financial problem but a medical one.

The Storm's Aftermath

Like a gale-force, straight-line wind, the 2007 recession blew through the U.S. economy, toppling everything from giant redwoods such as Lehman Brothers to meager saplings such as hapless mortgage holders. No sector was spared, and health care was no exception. Multibillion-dollar insurance and hospital corporations wavered, physicians groaned, and patients stumbled. For many, not enough money meant not enough health care, and the recession became not just a financial problem but a medical one.

Those at the bottom of the socioeconomic ladder have felt the pain of the recession the most. Homeless people have found services harder to get as government programs contracted even as the size of the homeless population expanded with the working poor becoming the nonworking homeless. In Minnesota, the lacunae in the safety net for the destitute became gaping holes as Gov. Tim Pawlenty axed General Assistance Medical Care. Many of those individuals were rescued when Minnesota expanded Medicaid, and many more will have access to Medicaid in the future if the provisions of the Patient Protection and Affordable Care Act (ACA) survive. Times are still tough for the downtrodden.

More uninsured patients meant more uncompensated care for hospitals that were already struggling with Medicare cuts and shrinking reimbursement from all sources. Elective admissions sagged as patients deferred all but the necessary. Even deliveries declined, suggesting that people were perhaps deferring parenthood. In 2008 and 2009, rounds of layoffs rippled through hospitals in the Twin Cities and elsewhere and hospital systems trimmed their budgets. For small hospitals such as Virginia Regional Medical Center in Virginia, Minnesota, the cuts weren't enough

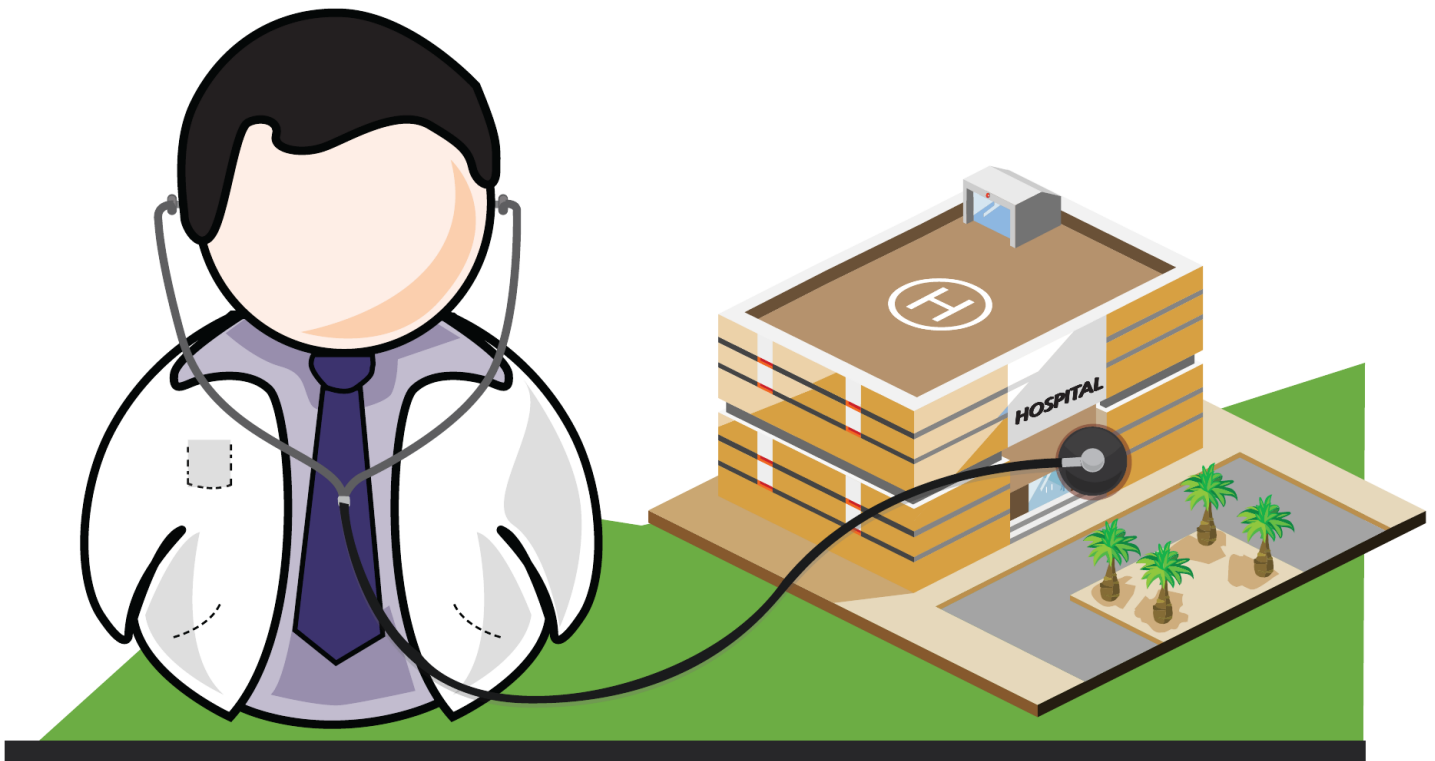
to find the black ink and they have reluctantly sought a larger partner.

Physicians have seen the ravages of the recession firsthand. Lack of insurance or ballooning deductibles keep patients out of the office. When they do arrive, patients come in having stopped taking their medications or started taking them every other day because they can't afford them. Or they come in only when their illness is dire or possibly beyond help. Or they don't come in. Fewer patient visits mean more independent physician practices are struggling. Like all businesses that face shrinking income, they are looking for alternative sources of revenue, ways of chopping overhead, or, like the town of Virginia, a white knight to bail them out.

Perhaps the gray lining to an otherwise black economic picture is that the previously relentless growth of health care spending has slackened since the recession started. Health care expenditures are still growing, but the rate of growth has dropped to a level not seen in years, and the bite that health care takes out of the U.S. economy finally stabilized in 2010. Whether Americans will resume their spendthrift habits when the economy recovers depends on the fate of the ACA or replacement legislation and the will of physicians in this country to throttle our spending.

As we start 2012, the winds of recession seem to be ebbing. There are inklings of economic recovery. Joblessness is down. Banks are stabilizing. So perhaps new growth in the health care forest is around the corner. It can't come soon enough for all players in the health care market.

.....
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■ Hospital Finance

Feeling the Pinch

How the recession has affected the state's hospitals. | BY KIM KISER

Minnesota's hospitals have felt the effect of the recession in a number of ways, but especially in terms of uncompensated care and fewer admissions.

According to Minnesota Hospital Association (MHA) data, hospitals in the state saw a 106 percent increase in uncompensated care costs (charity care and bad debt) from \$151 million in 2004 to \$311 million in 2010 (Figure 1). Among the reasons for the increase is the fact that many people lost their jobs and the health care coverage that went with them. At the same time, more employers (and individuals) started turning to health plans that have higher deductibles and co-pays. "That means more cash

out of pocket on the part of employees," says Joe Schindler, vice president of finance for the MHA. And when those individuals don't have the money to pay for their share of their care, it shows up on the hospital's bottom line as uncompensated care.

The state's hospitals also saw utilization decline. Acute care admissions dropped between 2007 and 2010 (Figure 2), with the biggest declines seen among people with employer-sponsored or individual commercial insurance (Figure 3).

"We've seen a real softening of the market whereby people with coverage who have some skin in the game in terms of out-of-pocket dollars are holding off care to a certain extent," Schindler says. In addition, the state and federal governments have put pressure on hospitals to reduce preventable admissions and readmissions,

and ER visits.

Other factors affecting hospitals' financial health are the hit to investment income as a result of the stock market's ups and downs (Figure 4) and the fact that more and more procedures are now being done on an outpatient basis. The number of outpatient surgery visits, which are often for elective procedures, increased by more than 20 percent from 2007 to 2008, then fell by 1.6 percent from 2008 to 2009, and ticked upward by 4 percent from 2009 to 2010 as the economy started to recover (Figure 5).

"We've seen a real softening of the market whereby people with coverage who have some skin in the game in terms of out-of-pocket dollars are holding off care to a certain extent."

—Joe Schindler

“As people’s job situations stabilize or their medical coverage stabilizes, they are more willing to go ahead with elective procedures,” Schindler explains.

What is likely to affect hospitals even more in the future is the increasing number of Minnesotans getting their health care coverage through

public programs. With the baby boomers aging, more are becoming eligible for Medicare, which, according to the Health Care Cost Information System, pays 84 cents for every dollar of the cost of treating patients.

In addition, more people are likely to become eligible for

Medical Assistance (MA), the state’s Medicaid program, as a result of the federal government’s eligibility expansion in 2014. Medicaid pays hospitals 75 percent of the cost of care. “It’s a good thing, but it does put pressure on hospitals’ finances if Medicaid patients are a bigger percentage of hospital

admissions,” Schindler says of the expansion.

He says that even though hospitals lose money by treating Medicare and Medicaid patients, it’s better than when people go without insurance. “Some money is better than no money,” he says. ■

Figure 1 • Uncompensated Care Costs

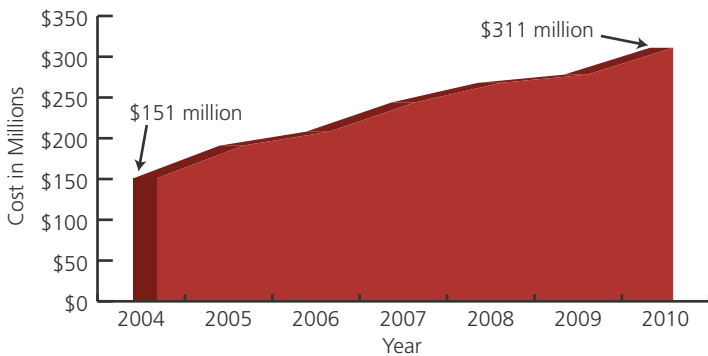


Figure 2 • Acute Care Admissions

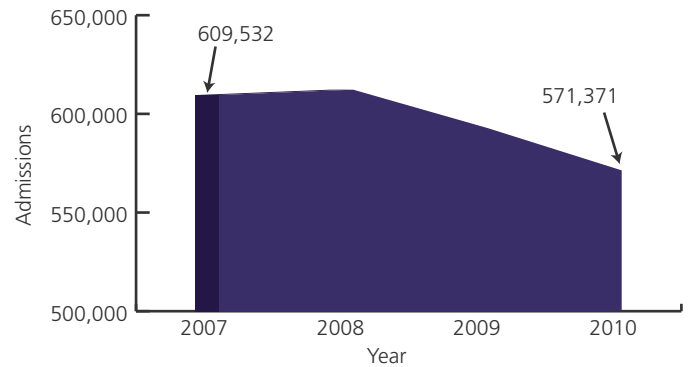


Figure 3 • Inpatient Trends by Insurance Type

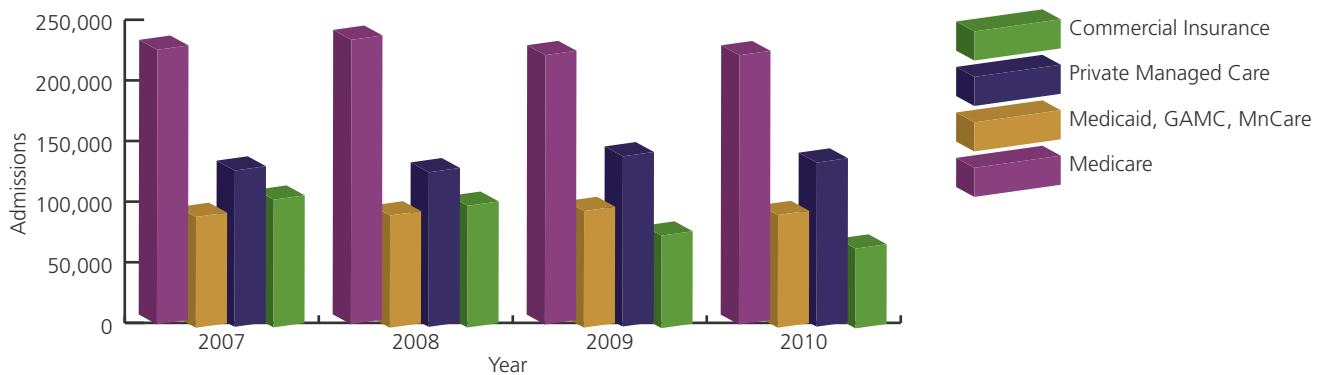


Figure 4 • Nonoperating Revenue Trends

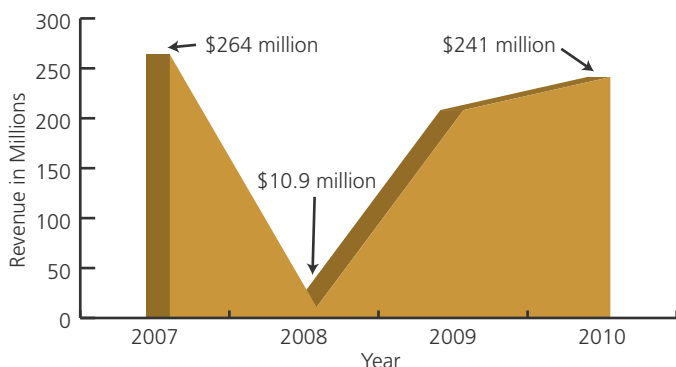
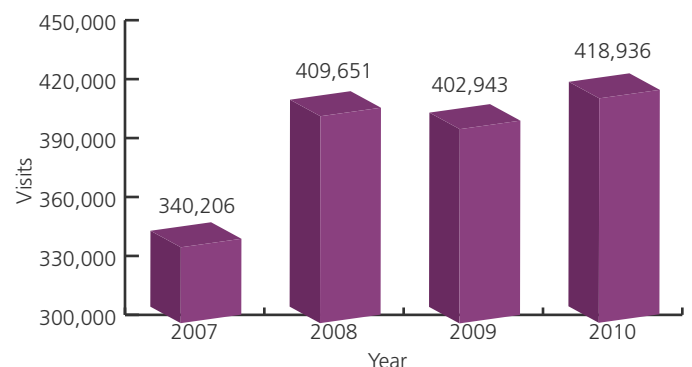


Figure 5 • Outpatient Surgery Visits



Source for all figures: Minnesota Hospital Association



Photo courtesy of Virginia Regional Medical Center

Virginia Regional Medical Center is in negotiations with Essentia Health to become part of that system.

■ Small Hospitals

Losing Independence

A small, locally owned hospital comes to grips with the fact that it can no longer make it on its own. | BY SUZY FRISCH

For 75 years, Virginia Regional Medical Center (VRMC) has been a fiercely independent hospital providing health care in the equally self-reliant Iron Range city for which it is named. The 83-bed hospital serves Virginia's 8,700 residents and more than 88,000 others living in surrounding communities, offering medical services ranging from general surgery and obstetrics to urology and

orthopedics.

A city-owned institution, it has been a point of pride in the community, one that residents watch over as part of their municipal government. Yet as much as Virginia wants to keep community control over its hospital, city leaders have had to make some tough decisions in recent years. After three years with operating losses totaling \$5 million and facing \$15 million in needed

repairs and maintenance, the Virginia City Council and its hospital commission recently voted to allow VRMC to become part of a larger health care system.

Numerous factors contributed to the hospital's problems, including the departure of 15 physicians and difficulty recruiting new ones. VRMC has had to use temporary—and more expensive—providers to maintain services.

There were new demands for technology and crumbling infrastructure. And when the recession hit, more Virginia area residents lost their jobs and insurance and turned to Medicaid, which along with Medicare doesn't reimburse providers as well as private insurers, compounding the hospital's financial problems.

"The headline from our *Mesabi Daily News* the other day was that the decision was

based on too many losses, too many needs, too many reimbursement cuts. And that sums it up,” says Steve Feltman, VRMC’s interim CFO. “It’s been a difficult challenge to create sustainability for the long-term future.”

A Common Scenario

In many ways, VRMC’s challenges reflect those of all small, independent hospitals. And many are realizing that they can’t go it alone anymore.

Terry Hill, executive director of the National Rural Health Resource Center in Duluth, has seen a number of independent hospitals wrestle with the same issues. He says that although independent hospitals in Minnesota aren’t totally extinct, they are quickly vanishing. “With the recession, with the increase in charity care and bad debt, and new demands from the federal government, which are expensive to meet, we are seeing rural hospitals struggle financially. A significant number, close to half, are in the negative territory,” Hill says. “We’re concerned.”

VRMC’s leaders started thinking about affiliating with a larger health care system in 2009. After enduring annual losses between 2008 and 2010, the hospital commission and the city council put out requests for proposals to more than a dozen health care provider organizations and management firms, garnering responses from Essentia Health and St. Luke’s Hospital, both based in Duluth, and Fairview University Medical Center,

which has a hospital in nearby Hibbing and is part of Minneapolis-based Fairview Health Services.

In December, city leaders voted to begin negotiating with Essentia, which has facilities in Minnesota, Wisconsin, North Dakota, and Idaho. In exchange for a 20-year lease agreement with VRMC, Essentia would invest \$17 million in capital improvements. Details are still being worked

“With the recession, with the increase in charity care and bad debt, and new demands from the federal government ... we are seeing rural hospitals struggle financially.”

—Terry Hill

out, with plans to make the agreement final in June. Although the decision was difficult, hospital and city leaders, along with community residents, agreed that something needed to change if they wanted to keep a hospital in Virginia at all.

Bitter Pills

More than two-thirds of Minnesota’s 148 hospitals are part of a larger system in one way or another, either through affiliation, management agreement, merger, or another arrangement. Becoming part of a larger entity has been the trend for small hospitals for a number of years, says Lawrence Massa, president and CEO of the Minnesota Hospital Association.

“But it’s really been accelerating now, though, in response to a number of issues,” he says.

“Federal health care reform has raised the bar in terms of people’s views of organized care and care coordination. And electronic medical records will be a huge challenge for stand-alone and independent hospitals. That’s another driver causing independent hospitals to say, ‘We could do this better if we had partners.’”

Partners are definitely what VRMC needs. For starters, the hospital needs \$5 million

for immediate physical plant repairs, including \$600,000 to upgrade two elevators to meet safety codes. It also needs to spend about \$8 million for new technology such as MRI and CT equipment. In addition, the hospital needs to invest \$2.5 million in the information technology infrastructure used to run an electronic medical record system, Feltman says. That includes more servers to support the installation of new terminals in every patient and exam room, additional power sources to run all of those servers and equipment, cooling systems, back-up generators, and more.

The federal health care reform law requires providers to use electronic medical record systems by 2015 or face financial penalties. Although the end result will be greater collaboration between medi-

cal professionals, more efficiency, and better quality care, implementing such a system is a daunting and expensive venture.

“The government is almost forcing us to spend that money on electronic medical records, and if we don’t, our reimbursements are lower,” says VRMC CEO Bill Smith, who also is director of human resources. “It’s a vicious cycle.”

VRMC faced some unique challenges as well. One was a declining—and aging—population. With the mining industry stagnant, the population on Minnesota’s Iron Range has shrunk drastically. (Virginia’s population peaked at 14,034 in 1960, according to the U.S. Census; today, it is 8,712.

The average age of its residents is now 43.2 years, compared with 35.4 years in Minnesota overall, and the birth rate has dropped considerably. For example, in the 1960s, the hospital delivered 1,500 babies a year; now it delivers fewer than 300, says Bob Rutka, M.D., a family physician at VRMC Clinical Services.

In addition, more residents are relying on Medicare and Medical Assistance (MA), the state’s Medicaid program, than in the past. Feltman notes that 56 percent of the babies born at the hospital now are covered under MA, and MA is the fastest-growing segment of VRMC’s patient mix. Medical Assistance and Medicare pay much less than private insurance. At the same time, the hospital is facing a reduction of \$550,000 in state government funding over the next biennium, as a result of cuts that

were made to health care providers in an effort to balance the state's budget last summer.

VRMC tried to become a Critical Access Hospital, a federal designation that was created in the late 1990s to help rural hospitals survive financially. Such hospitals receive higher Medicare reimbursements (cost-based reimbursement, plus 1 percent). But in order to qualify, a hospital needs to be 35 miles away from the next closest facility, and Virginia couldn't meet that standard, Hill explains.

With declining reimbursements and revenue came cuts in services—and difficulty recruiting and retaining physicians. Those who might have once considered a move to a community such as Virginia

Why put down roots in a community when the hospital can't afford modern technology or it looks like it might go under?

have stayed away because they are nervous about VRMC's financial status, according to Feltman. Why put down roots in a community when the hospital can't afford modern technology or it looks like it might go under? As a result, the hospital could no longer offer round-the-clock service in some areas including general surgery. In addition, Essentia Health, which operated the urgent care facility at the hospital, had to shut it down in 2010 because of a lack of staff, Rutka explains.

Attractive Offer

VRMC hopes that by partnering with Essentia, it will be able to expand services to include 24/7 general surgery and orthopedics, and offer more robust oncology, cardiology, and pulmonary care.

"We want to take what we have and grow it to the next level," Feltman says.

He believes it will be easier to recruit new physicians to town once the hospital becomes part of a larger organization. "It's difficult to recruit solo practitioners," he acknowledges.

Being part of a larger organization where they have support will be attractive to potential candidates, he says. Physicians who already work in Virginia have been told nothing will change for them if Essentia or another health care system takes over the hospital.

Rutka, for one, sees positives in working for an organization that employs hundreds of physicians. "The more physicians become involved with large providers, the less they become involved in nonpatient care activities such as recruitment and financial management," he says.

And for many doctors, that's reason enough to not want to work at an independent hospital. ■



INBOX



When changes in the local health care landscape promised a major influx of new UCare members coming through metro-area clinics and hospitals, we made sure those providers were prepared. In a span of just two weeks, Rebecca was among the UCare staff that personally visited 449 unique health care locations to offer a heads-up and explain the impacts. Because being responsive to our partners' needs isn't just talk—it's what we mean by health care that starts with you.



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Addressing the housing needs of patients who are homeless can have a positive effect on their health.

Department of Social Services to pilot a project to improve health outcomes for homeless patients and lower costs by reducing the number unnecessary ED visits and inpatient hospital stays called Hospital to Home. The project connects people who have experienced long-term homelessness, have chronic illnesses, and are frequent users of the ED (five or more visits in the previous year) with a multidisciplinary team that can help them secure permanent housing and coordinate their medical care.

Hennepin County Medical Center (HCMC) in Minneapolis has taken a similar approach, contracting with Hearth Connection and Spectrum Community Mental Health to add housing to the services it already was offering to patients who were homeless and heavy users of hospital and clinic services.

And North Memorial Medical Center in Robbinsdale, working with Catholic Charities, recently opened a new five-bed respite program at the Exodus Residence in downtown Minneapolis for homeless adults who are well enough to be discharged from the hospital but not well enough to recover in homeless shelters or on the streets. Patients receive nursing care and support services at a cost that is much lower than that for hospital care. “I think of it as literally ‘home’ care for people experiencing homelessness,” says Dawn Petroskas, R.N., health services manager at Catholic Charities.

The Home-Health Link
Research is increasingly showing that a small group of homeless individuals with chronic medical conditions, mental health diagnoses, and/or substance abuse problems use a disproportionate amount of ED and inpatient resources. And although ED costs represent less than 3 percent of U.S. health care expenditures, hospitals and health care providers struggling to cut costs and deliver service more efficiently are increasingly focusing on this group.

In Minnesota, the focus on homeless patients became more acute after the state Legislature eliminated funding for General Assistance Medical Care, which provided coverage for the poorest of the poor, in 2010. The state provided a block grant to each of four hospital systems, at about one-third of the previous funding level, to provide care to this population, explains Pam Clifford, director of the Center for Health Care Innovation at HCMC. HCMC responded to the 2010 funding cut in multiple ways, two of which were to create a special clinic for those who were most frequently hospitalized and to help some of those patients who were homeless obtain permanent housing with services.

“We believe that you can’t really work on your health unless you have a stable home,” says Richard Hooks Wayman, executive director of Hearth Connection, which acts as an intermediary between various organizations working to end homelessness in Minnesota and provides care coordination and housing services for Regions’ and HCMC’s projects. Insu-

◆ Health and Homelessness

Rx for Health: A Home

Hospitals address long-term homelessness. | BY TROUT LOWEN

It’s a scenario all too familiar to emergency physicians in metropolitan areas: A homeless individual arrives in the ED in crisis and suffering from multiple health concerns—hypertension, diabetes, or chronic pulmonary disease, for example—coupled with long-term alcoholism and mental health problems. The ED staff stabilizes the patient, updates his medications, and releases him with instructions for follow-up care. But with no place to rest and recover, nowhere to store medications, and no access to a primary care clinic, the person relapses and ends up back in the ED within days or weeks. It’s a cycle that’s

expensive for hospitals, bad for patients, and difficult to break.

“We see patients like this all the time in the ED, and it’s frustrating,” says Bjorn Westgard, M.D., an emergency physician at Regions Hospital in St. Paul. “We’re always looking for something better and there are so few resources out there.”

That may be changing. Regions and two other Twin Cities hospitals have recently implemented projects designed to stop the revolving door for some of their most frequent ED patients. In 2009, Regions teamed up with Guild Inc., Hearth Connection, Spectrum Community Mental Health, and the Minnesota

lin freezes outside. Nebulizers require electricity. Even water for hygiene is difficult to come by. Wayman says the first focus needs to be on helping homeless individuals find appropriate housing.

The Projects

Regions has served seven people ranging in age from 26 to 56 years since it took on the issue of finding housing for the homeless in 2009. Four are women. All met the federal criteria for long-term homelessness (continually homeless for one year or more or four times in the past three years). The length of time spent homeless ranged from 14 months to 22 years. All have been diagnosed with a serious mental illness and at least one chronic health

condition. In the year prior to enrollment, the seven participants made 110 visits to EDs and 31 to primary care offices.

According to an interim evaluation of the project published in January by Wilder Research, all seven participants were moved into stable housing within three months of enrolling in the program, and as of October 2011, all were still housed. All seven decreased their use of the ED. Inpatient hospital stays were less frequent and shorter. The number of pharmacy claims, medications accessed, and pharmacy visits all declined as well.

Westgard, the lead physician for the Hospital to Home project at Regions, says he's excited by the results so far.

“You get someone housed, and you give them some support, ... and you can get their health problems under control.”

—Bjorn Westgard, M.D.

So much so that the hospital is now looking to expand the program to an additional 18 participants.

“I really think this is the best thing for patient care in this situation,” he says. “You get someone housed, and you give them some support, something they’ve never had—continuity in their life or at least not much continuity in their life—and you can get their health problems under control. I think that’s pretty exciting.”

HCMC’s project got underway last March and has served three people. Two have been moved into permanent housing; the third is expected to be housed soon. A fourth is waiting in the wings, Clifford says.

Part of the challenge has been identifying participants who meet the federal definition of long-term homelessness. “It’s not as easy as it sounds. People aren’t writing down in a little book all the time that they’re homeless,”

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she says.

Like Regions, HCMC will be tracking participants' ED usage, clinic visits, and other criteria to evaluate the effect of housing. Organizers expect the program will have a positive impact on cost. HCMC's investment is \$21,000, a small amount, given the costs of inpatient and ED care. "We're talking about \$21,000 for four folks for housing and supportive services," Clifford says. "Our average charge for an inpatient is \$6,000 to \$10,000. It doesn't take a rocket scientist to figure out that providing these kinds of supportive housing services can help in many ways."

Anecdotally, Clifford says, HCMC is already seeing results on another measure. "We

want patients to be in better health and better satisfied with their quality of life, and we are seeing that."

The respite program for North Memorial patients opened for referrals on December 12. Funded for one year by a \$30,000 grant from Medica and \$60,000 from North Memorial, the center offers private rooms, a shared bath, and three meals a day. The program can accommodate up to five patients. Patient stays may last from a few days to a month or more depending on need, Petroskas says. Patients will receive some direct medical care along with care coordination services such as help with appointment scheduling and transportation and assistance accessing social services.

Similar recuperative care programs have shown good results in other cities. According to an article published in 2009 in the *Journal of Prevention and Intervention*, homeless patients discharged to a medical respite program saw 50 percent fewer hospital readmissions within 90 days than patients discharged to their own care.

"The hope is we can demonstrate that we offset some of North Memorial's costs and that money can be reinvested in the social and nursing services needed to support the program," Petroskas says.

Hearth Connection staff are also hoping to convince hospitals, providers, and politicians that channeling money into supportive housing and preventive medical care will pay

off in reduced hospital costs and improved patient outcomes. In addition, they think programs such as Regions' and HCMC's will go a long way toward ending long-term homelessness in the state.

Hearth Connection is applying for a grant that would allow them to serve 125 more people in Rochester and in Ramsey and Hennepin counties, enough to make a significant dent in the homeless population.

"We're not talking about tens of thousands of people," Wayman says. "If we could serve 150 to 300 over the next decade, we might actually reform many systems of care for the better. It's something you can really wrap your arms around." ■



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STORIES FROM A



STRUGGLING ECONOMY

By Jeanne Mettner

How the recession has affected the practices of Minnesota physicians.

When the recession officially began in December 2007, life took an unexpected turn for countless people across the United States. Many lost jobs and the health insurance coverage that went with them. Some lost their homes as well. Some returned to the workforce, taking positions that paid less than their previous job and came without benefits. Although the downturn was technically declared over in June 2009, the economy continued to sputter.

Fallout from the recession made it into physicians' practices. In a 2009 survey done by the American Academy of Family Physicians, nearly 90 percent of the family physicians surveyed

reported that their patients had "expressed concerns recently over their ability to pay for their health care needs." Sixty percent reported seeing "more health problems caused by their patients forgoing needed preventive care." Close to two-thirds (64 percent) reported a decrease in the number of patients with employer-sponsored or private insurance, and 87 percent said they had seen a significant increase in patients with major stress symptoms since the beginning of the recession.

Minnesota physicians in many specialties have seen the impact of the recession on their patients and their practices. Here's what a few have to say.

Nearly every day, Tseganesh Selameab, M.D., a primary care physician at Hennepin County Medical Center's Medicine Clinic in Minneapolis, witnesses the effect that the economy has had on her patients—either through

"I had another patient miss an appointment, presumably because he lost his insurance. He is currently getting active treatment for tuberculosis, so I am going to have to talk over things with him over the phone—and figure out how I can get him the rest of his

their diabetes. There are many office visits when they just need to talk, and I have little to offer in terms of solutions. All I can give them is my empathy, and that's not something we're accustomed to as physicians. We're used to being in a position where we can change the

She does not hold out hope that the government will save the day. "I don't see our lawmakers pushing to expand services to people; I see them pushing for decreases," Selameab says. "It's frightening to hear that rhetoric because it really is negatively affecting the quality and even length of people's lives." She sees the state's recent decision to discontinue emergency medical coverage for immigrants as an example of harsh legislation driven by a desire to save money after the recession. "This act that denies sick patients dialysis, chemotherapy, and, for one of my paraplegic patients, care at home that keeps him alive seems short-sighted at best, inhuman at worst," she says.

"ALL I CAN GIVE THEM IS MY EMPATHY."

the stories they tell or the stories their absence tells. "I had a patient come in yesterday who was talking about how he was losing his job in the next year and what anxiety that is causing him," Selameab says.

Hennepin County Medical Center's Tseganesh Selameab, M.D., says she often feels powerless when she hears her patients talk about how the downturn in the economy has affected their lives.

medications."

Selameab admits their stories make her feel powerless—an uncomfortable feeling for someone used to being able to help people: "A lot of times, I hear, 'I am losing my job,' 'I am losing my house,' and I realize that the context of my practice is going far beyond managing their hypertension, managing

outcome of things."

Even though news reports indicate the economy is slowly improving, Selameab doesn't yet see her patients' situations changing. People are still losing jobs, she says, and while some may be finding new ones, those jobs come with sizeable reductions in pay and often no benefits.



In early 2008, Olmsted Medical Center was looking to build a new clinic in the northwest corner of Rochester. The leadership team had developed plans for a new building and was shopping for bonds when the stock market crashed. “At the time, it was very difficult for nonprofit organizations to borrow money. You couldn’t get a letter of credit; you couldn’t get bond insurance, so basically we decided to wait, which put us a full two years behind schedule,” says Roy Yawn, M.D., Olmsted’s president and an internal medicine physician.



Roy Yawn, M.D.

“IT WAS VERY DIFFICULT FOR NONPROFIT ORGANIZATIONS TO BORROW MONEY.”

By early 2010, the banks had started loosening up the requirements for borrowing money, and Yawn and the other leaders went ahead with the project. That timing did have an advantage—by way of what Yawn calls “an exceedingly hungry construction industry.” “People were scrambling for business, and the construction firms were

very accommodating,” he says, adding that the contractor they worked with came in ahead of schedule and under budget. The clinic opened October 3, 2011.

Delaying the building of the new clinic wasn’t the only effect of the recession the group has seen. Yawn says bad debt has risen dramatically in recent years in part because more insured patients have policies with high copays and deductibles that they were unable to pay. He says new patient registrations have dropped since 2008 and charity care has risen steadily, doubling from \$1.1 million in fiscal year 2009-10 to \$2.2 million in fiscal year 2010-11.

In addition, Yawn says his patients are expressing concern about their financial situation. “I hear a lot about money when I am in the clinic,” Yawn says. “Because I am primarily seeing geriatric patients, I often hear them talk about living

off of lower interest rates from their CDs and other investments, and they tell me that they don’t want to come in as often. People are very cautious about retiring until they are eligible for Medicare or have a spouse who can continue to work and cover them under his or her insurance.”

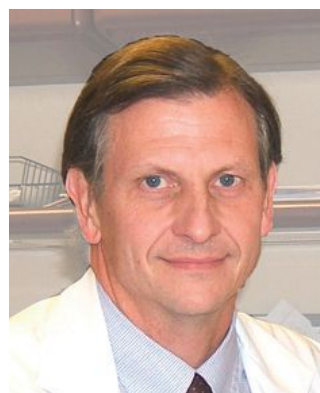
When family physician Christopher Wenner, M.D., opened his solo practice in rural Cold Spring, Minnesota, he was determined to make it work by using a very conservative business model—a tight budget, no support staff, and little overhead. What he didn’t expect was the economy to tank about the same time he hung out his shingle. Thirty months into his practice, he still has not met his annual or monthly projections in terms of patient numbers. And he has been supplementing his income with other work. “My financial stability

has depended on the various moonlighting gigs that I have,” he says.

He attributes the smaller-than-projected number of patients to the economic downturn, and, more specifically, the rise in the number of patients with only catastrophic insurance. (Wenner has such a policy himself and admits it helps him relate to his patients when it comes to budgeting for health care expenditures.) “I see some people who have chronic diseases who should be seen more frequently but instead come in for their annual physical, which they are allot-

As medical director of North Point Health and Wellness Center, a federally qualified community health center in north Minneapolis, Paul Erickson, M.D., M.P.H., can tell story after story about how the economy has affected the health of his patients—sometimes in life-threatening ways: For example, a 30-year-old renal transplant recipient lost his job and stopped taking his antirejection medications because he could no longer afford them. After months without his medications, he wound up at North Point, where he learned that his transplanted kidney had failed. Another patient quit taking his blood pressure medications after losing his job and his health insurance. His blood pressure skyrocketed, causing his kidneys to begin to fail by the time he came to North Point. “These are the costs of the recession that we are seeing,” Erickson says.

The clinic, which receives federal funding and provides medical, dental, and mental health care and pharmacy services, serves about 23,000 patients, predominantly Afri-



Paul Erickson, M.D., M.P.H.

can Americans (50 percent), Latinos (20 percent), Southeast Asians (15 percent), and immigrants from other parts of the world (10 percent). It is located in a part of the city that is considered medically underserved and was hit hard by the housing crisis and job losses. As a result, North Point

ted under a catastrophic plan, and they try to get their three or four chronic conditions managed during that visit,”

ductibles—\$5,000 to \$10,000, in many instances—patients are more cogent of what health care costs. That can be a good

“PEOPLE ARE SEEING HEALTH CARE AS A DISCRETIONARY SOURCE OF SPENDING.”

he explains. “That’s not the best way for them to receive care, but it works for them, so they don’t have a huge out-of-pocket expense.”

As a result of having health insurance plans with high de-

thing, Wenner admits. But that awareness has also shifted patients’ perceptions of medical care in general. “The fact is, people are seeing health care as a discretionary source of spending, just like shoes



Photo by Steve Wewerka

Christopher Wenner, M.D.

and automobiles,” he says. “It’s not regarded as a necessity anymore, and that shift in perception is what’s had the biggest impact on my practice.”

Despite seeing fewer pa-

tients than he hoped for, Wenner is still glad he decided to open up a private practice at a time when most physicians opt for the security that goes with working for a large system. “When I see someone who comes in who is uninsured, it’s so liberating to be able to treat that person and at the end of the visit, say,

“There is no charge; have a great day,” he says. “Just being able to make that decision is unbelievably fulfilling; it makes me delighted to be where I am today.”

has seen a dramatic increase in the number of patients who are uninsured—from 28 percent of its total patient population in 2007 to 45 percent in 2010. “Along with more unemployment and foreclosures, we are seeing cutbacks in funded programs, most of which are a reflection of the recession, and those crises trickle down to our

In addition to seeing increases in the severity of patients’ medical conditions because of delays in care, Erickson is also witnessing growing awareness in the medical community of the impact of the social determinants of health. “We have a significant number of people with mental health and behavioral issues—depression, for

“IF YOU DON’T HAVE A JOB OR MONEY ... IT’S GOING TO TAKE A TOLL ON YOUR MENTAL AND PHYSICAL HEALTH.”

patient population as well,” Erickson says. North Point was especially affected by the elimination of General Assistance Medical Care (GAMC), a state program that provided health coverage to some of the state’s poorest, most vulnerable adults. It was dissolved in 2010 as a budget-cutting measure.

example; and while it’s important to treat them as medical conditions, there are also social determinants that account for those conditions. If you don’t have a job or money, a place to live, food, a safe place for your kids to play, it’s going to take a toll on your mental and physical health.”

As the only psychiatrist in private practice in northeastern Minnesota, Joseph Sivak, M.D., is still witnessing the toll that the economic downturn exacted on his patients, particularly the elimination of GAMC, a program that historically provided health care coverage for low-income adults who had no children and did not qualify for other public health care assistance. When the program disappeared in 2011, so, too, did some of Sivak’s patients. “There were about 20 individuals I had followed for several years who just stopped coming to see me; it was a total debacle, even when I tried to see them for free,” Sivak says. “A couple of the individuals didn’t get folded into any other program, and they were so stressed over losing their medical insurance that they ended up in the hospital.” Seeing and following

these ill patients on an ongoing, outpatient basis, he says, can keep them out of the hospital. “Most of my patients are so economically disadvantaged, or living



Joseph Sivak, M.D.

below the poverty level, that they are almost immune to the recession. But with something like the dissolution of a public assistance program, you definitely see the effects.”

Sivak’s GAMC patients weren’t the only ones affected by the recession. He says he also has seen “a handful” of patients who have become

"FIVE YEARS AGO, THE ECONOMY WASN'T A COMMONLY OCCURRING, DAILY PSYCHOSOCIAL STRESSOR THAT WE HAD TO FACTOR IN."

depressed because of financial problems that emerged as the economy deteriorated. "Five years ago, the economy wasn't a commonly occurring, daily psychosocial stressor that we had to factor in consistently

and consider. Today, it's a common stressor," he says. Sivak also sees patients who initially had insurance but lost it when they or their spouse lost a job.

In order for them to continue receiving care, both

Sivak and his patients have had to adjust. "I have literally had people come in and pay some portion of an already reduced bill in quarters," he says. Sivak says that he's continued to see patients who can't pay their

bill. "Ethically I won't disrupt care or stop treating a patient because they can't pay or lost their insurance. I don't do that. Sometimes, to keep my practice going, I've had to finance day-to-day operations on my own credit card. It stinks to be doing that. However, the reality of these economic times goes far beyond that. Patients are losing their care—and it's affecting them very seriously, and that is very sad."

During the past four years, the Minnesota Center for Obesity, Metabolism, and Endocrinology (MNCOME) in Eagan has faced some tough times. According to Medical Director J. Michael Gonzalez-Campoy, M.D., Ph.D., the one factor that affected MNCOME's finances the most was the change in banking practices after the speculative mortgage market was exposed. "MNCOME was about to get a Small Business Administration loan to refinance the practice when the banking rules became more stringent, and this made it impossible to refinance four years ago," Gonzalez-Campoy says. The loan would have allowed MNCOME to consolidate its loans and set up a laboratory, which would have provided a new revenue stream. Instead, the practice had to rely on personal loans from friends and family and put projects on hold in order to weather the downturn. MNCOME eventually had to lay off staff has not replaced a certified

diabetes educator, physician's assistant, and bariatric physician who left for other opportunities.

Gonzalez-Campoy has seen the effect on his patients as well. He says more than 70 percent are dealing with higher insurance premiums, higher deductibles, fewer covered services, and higher copays for specialty office visits. "The disease that this practice focuses on—obesity—is frequently

"IF OUR PATIENTS STRUGGLE FINANCIALLY, THEN OUR PRACTICE STRUGGLES FINANCIALLY."

carved out or excluded from care," he explains. Often, his patients are unable to pay their bills, and the clinic has had to write off "large amounts" of patient debt. "If our patients struggle financially, then our practice struggles financially," he says.

Cost has led some to delay

care. As an example, Gonzalez-Campoy describes a patient with type 1 diabetes who was not coming in for her quarterly office visits because of increasing out-of-pocket costs. "In order for her to afford insulin, she chose not to come to clinic," he says. "We kept getting refill requests, which we honored, but eventually she had to come in. When she did, we found that her glyce-mic control had deteriorated

mostly because she was not able to afford the test strips required to monitor her diabetes closely." The patient did not have to be hospitalized, but Gonzalez-Campoy is concerned that her risk for long-term complications from diabetes may have increased.

MNCOME has found ways

to deal with the clinic's financial challenges. It has brought billing in-house. This not only has saved the practice money, but it also allows staff to work with patients to structure payment plans. And it has found



J. Michael Gonzalez-Campoy, M.D., Ph.D.

other ways to help patients as well. "We have continued to provide many patients with medications from the sample closet and helped put others in touch with pharmaceutical company programs to access medications," Gonzalez-Campoy says.

Kevin Donnelly, M.D., medical director of the St. Cloud Medical Group, a multispecialty clinic with nearly 50 physicians, has seen the economic downturn deal decisive blows to his patients, the majority of whom are privately insured (25% are on Medicare or Medicaid). He says money has become the driving force for many patients as they make decisions about whether to seek care. “I realize at the point of care that they should have been here six months before. I will ask them why they missed, and they’ll say, ‘I lost my job,’ or ‘I lost my insurance,’” he says. “During those visits, I may recommend things like

“When people aren’t controlling their diabetes and cholesterol, you probably aren’t going to see the really serious effects until years down the road, when they may have a heart attack or stroke or their kidney disease worsens,” he explains. “It becomes a matter of time before we see the neg-



Kevin Donnelly, M.D.

“YOU PROBABLY AREN’T GOING TO SEE THE REALLY SERIOUS EFFECTS UNTIL YEARS DOWN THE ROAD.”

colonoscopies that they are due for, and they say they just can’t do it right now, with many citing financial constraints as a reason.”

Because they are delaying care, patients with chronic problems such as heart disease and diabetes have not properly managed their conditions. In addition to skipping routine follow-up visits, some have cut costs by taking their medications less frequently or stopping them altogether. So far, Donnelly says, no one has come into his office suffering severe consequences from these cost-cutting strategies, but it’s the long-term repercussions that concern him.

ative consequences play out.”

St. Cloud Medical Group has taken steps in recent years to improve its own financial position. It froze staff wages and cut physician salaries by 15 percent for two years in the wake of a \$1.5 million loan for their new electronic health record system. In 2011, the group renegotiated its reimbursement contracts with third-party payers, which has helped keep it in the black. “We were profitable in 2011 and actually gave staff a bonus at the end of last year,” Donnelly says. “So at least in that respect, things are looking better.”

“WE BELIEVE THEY ARE SICKER BECAUSE THEY CANNOT AFFORD CARE, THEY ARE WAITING LONGER TO ACCESS CARE.”

Loie Lenarz, M.D., can tell myriad stories about how the economy has adversely affected the health of patients she sees. Lenarz is medical director for St. Mary’s Health Clinics, which provide free care to people who are uninsured and ineligible for government-sponsored health coverage. The clinics operate out of churches and community centers in the Twin Cities.

“I can tell you about a man who went for two years without his medications for diabetes after he got laid off; by the time he got to us, he was in pretty dire straits in terms of his health,” says Lenarz, who also is medical director of clinician professional development at Fairview Health Services. “Or I can tell you about a patient who had ascites because she did not access health care for months after she developed abdominal pain, and



Loie Lenarz, M.D.

she ended up with metastatic cancer.”

Lenarz says the clinics, which rely on volunteer physicians and other staff, have not seen a rise in their patient census but are seeing sicker patients. “We believe they are sicker because they cannot afford care; they are waiting longer to access care, and they don’t know about us until they are desperately in need.”

The acuity of illness in the patients they serve has required the volunteers at the St. Mary’s clinics to make difficult decisions about whether they should treat more people or provide more complete care for their patients.

“These individuals have no access to health care other than us,” Lenarz explains, “so we are left sometimes in a situation where we need to choose between managing an individual’s most severe health problems and not the less-severe issues that impact their quality of life, in order to see more people.” ■

Jeanne Mettner is a Minneapolis freelance writer and frequent contributor to *Minnesota Medicine*.

The Arm that Was Not Broken

A lesson on **cost** and **quality** of health care.

By Navneet S. Majhail, M.D., M.S.

The tranquility of what had started out as a quiet Saturday afternoon was disrupted by the howl of our 4-year-old son. “My hand is broken,” he cried.

The weekend before, he had fallen on his outstretched hand. An exam immediately afterward showed normal range of motion and no point tenderness around his wrist and elbow joints. Within a few minutes, he had recovered from the shock of falling and went back to playing with his friend. Over the next few days, there was an occasional whimper during a moment when he was bored, which was readily resolved with a hug, a kiss to his wrist, and a spoonful of ibuprofen.

As the week drew to a close, he seemed to have completely recovered, except for the sudden acknowledgement of pain around his wrist that Saturday.

I again examined his wrist and, despite the lingering possibility of a scaphoid fracture, reassured my wife that everything was O.K. However, her look told me that she wanted a second opinion; the last time I had evaluated a wrist injury was as a medical student more than a decade ago, and she wanted an X-ray and an eval-

uation by a more experienced physician. I agreed with her except for one problem—we did not have health insurance.

I had moved to a new position earlier that month, and my new health care coverage did not start until the first of the following month. Given that we were all relatively healthy and had very rarely needed urgent medical care, I determined that the probability of having a medical emergency during that four-week period was very low and decided to forgo paying for COBRA coverage. But alas, the tenets of probability do not always follow. Murphy’s Law kicked in, and there we were on that fateful Saturday afternoon with a possible broken wrist and no health care coverage. Resigned to the fact that I would have to self-pay, I looked at the silver lining—I could break the boundaries of network restrictions, and even though it was a Saturday afternoon, I could have the best orthopedic physician in town examine my son’s wrist. With that, I turned to Google to find one.

The websites of many orthopedic centers and providers boasted quality ratings of four (or five) stars on one patient-satisfaction survey or another. But what



Photo by Steve Wewerka

Kavneer and Navneet Majhail

were the measures and were they comparable? Did the number of stars correlate with patient outcomes? The name of one local orthopedic center came up as part of a website that provided “detailed reviews on roofers, plumbers, house cleaners, dentists, and more.” The center bragged that a very high proportion of its patient reviews were favorable; but I speculated that not everyone seen at that center was filling out the surveys. At another site, a provider had been given a very high rating based on one response from a patient who really liked the clinic’s waiting area.



Thirty minutes later and frustrated, I searched for and found (using Google Maps) a nearby orthopedic specialty center that was open on Saturdays. I dialed their number and after the initial pleasantries asked, “Do you have any metrics on the quality of your center? What are your charges for evaluating a wrist for a self-paying patient?” After a prolonged moment of uncomfortable silence, I was asked to wait for a more senior staff person to come on the line to respond my queries. I was assured that their center was staffed by well-qualified and experienced orthopedic specialists. For self-pay patients, the

There we were on that fateful Saturday afternoon with a possible broken wrist and no health care coverage.

visit would cost \$300 along with the costs of imaging and any treatment or other services provided. This sounded too expensive for an evaluation, which in my clinical judgment, was likely going to be negative.

I reset my expectations. The wrist injury was not complex, and all we needed

was an X-ray and evaluation by a good, experienced physician, not necessarily an orthopedic specialist. I again turned to Google, and searched for an urgent care center close to home. Based on my earlier experience, I knew I would not be able to gauge a facility’s quality. But I could

certainly find out more about how much fixing a broken wrist would cost. After browsing a number of websites advertising home and herbal remedies for wrist problems, I finally found a site that estimated the cost of nonsurgical treatment to be \$500 or less for a mild or moderate wrist sprain and \$2,500 or more for a fracture that required a cast. Even though I could not establish the reliability of these estimates, I began searching for provider and facility fees at nearby urgent care centers, thinking that we would go to the most affordable place and get an X-ray to rule out something acute; if the pain persisted, we would get an evaluation later in the week, when our health insurance coverage started. After looking at a number of websites and finding no information on provider visit or procedure costs, I finally found one that advertised “attractive rates” for self-pay patients.

With my wife’s patience wearing thin and my son’s howls getting louder, I decided it would be best to drive to

this urgent care center. As we got closer, we noticed a sheet of paper taped to the door stating that they had closed earlier than usual that Saturday. As I pulled out my smartphone to do more searching, I received my second look of the day from my wife and decided it would be best if we went to the urgent care center we had passed on our way to this one.

We checked in, and I was given an estimate for the provider visit. It would cost \$90 along with additional charges for any tests or treatments. After some waiting, we were ushered into an exam room and were promptly seen by a family physician. He heard the history, did a quick exam, and recommended an X-ray of both wrists and elbows, as there was the possibility of having a fracture in wrist or elbow joint areas of both arms. I hesitated some but then finally disclosed that we were self-pay and asked if it would be O.K. to image only the side that was symptomatic for now. He agreed, and we were escorted to the radiology area. The X-rays did not show

any fracture. By now, our son was busy in the play area and completely asymptomatic. I charged the visit to my credit card and headed home. The wrist pain has not recurred.

A few weeks later, our washing machine broke. After an hour of online research, I had excellent and reliable information about the quality, ratings, and cost of the various models available. I could easily make an informed decision about which model best suited our needs and budget. Hopefully, one day it will be as easy to find the same kind of information about treating a broken wrist. **MM**

Navneet Majhail is medical director and director of health services research for the National Marrow Donor Program and an adjunct assistant professor in the Division of Hematology, Oncology, and Transplantation at the University of Minnesota.



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State Delays Release of Provider Peer Grouping Report

The Minnesota Department of Health is delaying the release of its first report on the cost and quality of care provided by hospitals and clinics through the Provider Peer Grouping program because of serious shortcomings with the data and the department's desire to be responsive to concerns raised by stakeholders.

"The MMA applauds the decision to delay the release of the peer grouping report so that more current data can be used and methodological glitches can be addressed," says Janet Silversmith, MMA director of health policy. "We are glad that the state is listening to feedback and making changes in the program."

Department of Health officials concluded that it would not be useful to consumers to release the report because it is based on raw data from 2008 and 2009. Staff will start to compile Medicare, Medicaid, and private insurance claims data from 2010 and release a new report on hospitals in late 2012. A report on clinics will come sometime after that.

"The experience with this first rollout bolsters concerns that the MMA has been voicing all along, that the statistical methods of measuring hospital and clinic performance are not yet compatible with the desire to simply label high-quality, low-cost hospitals and clinics," Silversmith says.

Provider peer grouping is an effort to

rate hospitals and clinics based on their total cost of care as well as on the cost and quality of care for specific conditions—pneumonia and total knee replacement for hospitals, and asthma, coronary artery disease, congestive heart failure, and diabetes for clinics. The program was established through the state's 2008 health care reform act.

In addition to the data being outdated, the Department of Health discovered other shortcomings in the information it was using to do the comparisons when it re-

"The MMA applauds the decision to delay the release of the peer grouping report so that more current data can be used and methodological glitches can be addressed."

-Janet Silversmith, MMA Director of Health Policy

leased preliminary reports to hospitals in September 2011. These included the fact that some hospitals were shown to have no or few Medicare patients when, in fact, they had significant numbers of Medicare patients; some Medical Assistance patients were misclassified as having private insurance because their benefits were administered by a private insurer; some insurers did not submit claims data to the state; and out-of-state patients were excluded. The methodology for rating hospitals on quality also was problematic.

The Minnesota Hospital Associa-

tion voiced concerns about the errors and methodological problems. After hearing those concerns, Health Department officials initially proposed recalculating the hospital results and issuing reports in early 2012. But in mid-January, it announced it would delay publication until late 2012. In addition to obtaining more current claims data, the Department of Health plans to compare its data on hospital volumes with information in the Minnesota Hospital Association administrative claims database. Department officials say they are revising their quality scoring methodology so that there won't be artificial differences among hospitals.

The MMA supports greater transparency regarding the cost and quality of health care in Minnesota but has been critical of the short timeline for the Provider Peer Grouping project and the plan to use results for health plan network design. The MMA expects the Department of Health will face even more challenges as it attempts to rate clinics, in part, because outpatient care is often delivered by multiple physicians, facilities, and providers.

"We look forward to working with the Department of Health as they develop the clinic results, and we will continue to encourage the state to capitalize on the data's greatest potential—for hospital and clinic performance improvement, not as a tool for comparison shopping by patients," Silversmith says.

MEET A MEMBER

Patrick Zook, M.D. | By Lisa Harden

As he walks the halls of St. Cloud Hospital to see patients, Patrick Zook, M.D., knows he is a rarity—a family physician who makes hospital rounds.

Zook, who practices with the independent St. Cloud Medical Group, does hospital rounds one out of every eight weeks. Since he began his medical career more than three decades ago, he has seen not only the number of family physicians doing hospital work shrink but also medical student interest in pursuing family medicine decline—a trend he fears will continue unless something changes.

“If we don’t get more primary care physicians in the pipeline, the practice will wither very soon,” says the 64-year-old, who plans to keep working for at least the next five years. He worries about how his retirement and that of other baby boomers will affect the primary care workforce.

Zook believes issues such as inade-

quate physician reimbursement, Minnesota’s provider tax, and lower pay discourage young doctors from going into primary care. That’s why, he says, physicians need to speak up and do it collectively.

“As an individual, I don’t have much say, but as a member of the MMA, I have a stronger voice and an opportunity to get involved and help my profession,” he explains.

Zook joined the MMA in 1977 and has served three terms as a North Central District trustee. He has been a member of almost every MMA committee over the years, co-chaired a task force on pathology/laboratory billing issues, been a regular at the MMA’s Day at the Capital, and is a member of MedPac, the MMA’s political action committee. In 2007, he was honored for his services to the MMA with the President’s Award.

Zook has worked for health care reform, meeting with lawmakers from his

district to inform them of the effect various proposals would have on physicians and their patients.

In 2010, just days after the federal health care package was approved, he organized a forum to help physicians understand the new legislation. “The framework and ideals are there for positive change,” he says. “I hope the politicians can work it out through compromise and avoid paralysis.”

Zook has also worked on issues related to primary care through the Minnesota Academy of Family Physicians.

He admits such activities are time-consuming. “There are a lot of balls to juggle,” he says, then explains his reason for putting forth the extra effort: “I don’t want to see my profession falter.”



Patrick Zook, M.D.

Photo by Steve Weverka

States Must Now Determine Essential Benefit Set

Determining what should be included in an essential set of benefits for health insurance has been one of the challenges in moving forward with health care reform.

Given the difficulties, the Obama Administration recently assigned to states the task of deciding what should and should not be included in a set of essential benefits that health insurers must guarantee.

As part of the Affordable Care Act, individual and small-group plans must cover such benefits beginning in 2014, whether or not they are part of

a health insurance exchange.

The federal government recommended the benefits include those offered through a “typical employer plan.”

The MMA defines an essential benefit set as services comprehensive enough to sustain the health of an individual and to maximize health through all phases of life. The MMA recommends that the essential benefit package include behavioral health services, be standardized across insurers, and be affordable.

New Products for MMA Members

Member Advantage, a company owned by the MMA and Twin Cities Medical Society, is offering member physicians, their families, and their practices new benefits and services through partnerships with Sears Motor Sales of Plymouth, Innovative Office Solutions, and Unimed.

Sears Motor Sales of Plymouth can help with buying or leasing of a new vehicle, including arranging for financing and selling a trade-in. “You just tell them the type of car you want and they take care of the rest. It’s a great time-saver,” says Barry Weber, director of Member Advantage (formerly MMBR).

Innovative Office Solutions and Unimed have a joint program, offering one-

AT A **GLANCE**

CURRENT PRACTICE:

St. Cloud Medical Group

SPECIALTY: Family medicine

MEDICAL SCHOOL:

Creighton University, Omaha, Nebraska, 1974

RESIDENCY: St. Joseph's Hospital, Omaha, Nebraska

INTERESTS/HOBBIES: Playing softball, exercising, painting, woodworking, fishing, fish ponding, and playing with grandchildren

MMA INVOLVEMENT: North Central District trustee, third term; served on the following committees: Legislation, Public Relations, Membership, Executive Committee. Co-chaired a task force on pathology/laboratory billing issues

Adverse Event Deaths and Injuries Down in 2011

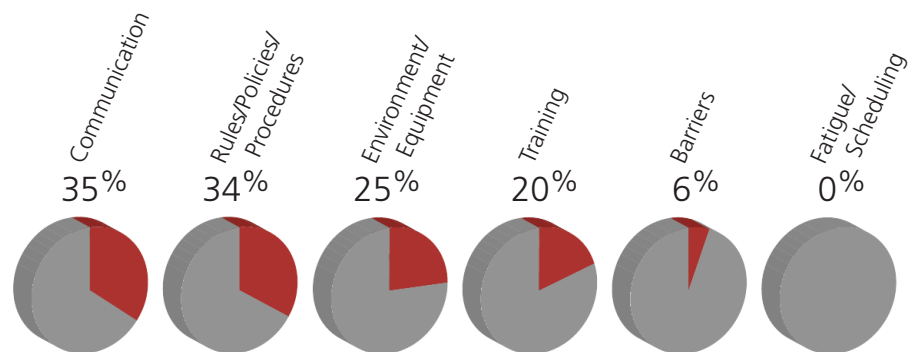
The number of errors causing serious injury or death to a patient in a Minnesota health care facility decreased from 107 in 2010 to 89 in 2011, although the total number of adverse events increased, according to the Minnesota Department of Health's annual report on adverse events released in January. In 2011, five patient deaths were reported—three from falls, one from a medication error, and one from

an embolism. This is the lowest number since 2007.

The total number of reportable adverse events in Minnesota hospitals, ambulatory surgical centers, and community behavioral health hospitals increased from 305 in 2010 to 316 in 2011.

The increase was attributed primarily to pressure ulcers and wrong procedures.

Contributing Factors*



*Does not include events with no identified root cause.

Source: Adverse Health Events in Minnesota, Eighth Annual Public Report

stop shopping for both office products and medical and surgical supplies.

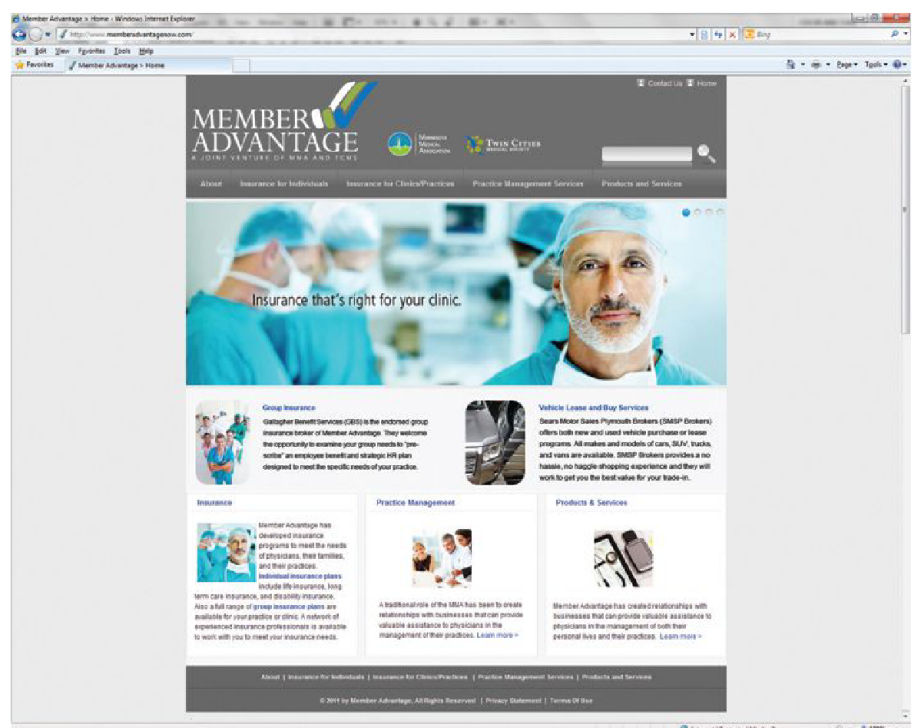
“The advantage that we can offer is that we understand physicians and their needs,” Weber says. “We’ve been able to find the best partners and do the legwork, so you don’t have to.”

New Services for Members

Discounts on

- **Office products**
Innovative Office Solutions
- **Medical supplies**
Unimed
- **Automobile purchases/leases**
Sears Motor Sales of Plymouth

On the [web...](http://www.memberadvantagenow.com)
TO SEE ALL OFFERINGS, VISIT
WWW.MEMBERADVANTAGENOW.COM



MMA Warns Against “Pox Parties”

The MMA sent out a press release in December advising parents not to hold “pox parties” and expressing concern about the antivaccine sentiment that is motivating parents to take such action.

The press release was prompted by national and local reports about parents holding parties to deliberately expose their children to the chicken pox virus under the mistaken belief that becoming infected is preferable to vaccination for developing immunity to the disease. The *Duluth News-Tribune* reported that a pox party occurred in northern Minnesota around Thanksgiving. Nationally, there have been reports of parents using Facebook to publicize the parties and ordering infected lollipops to expose children to chicken pox.

The MMA wanted to send the message to parents that vaccination, rather than intentional infection, is by far a safer and more effective option for protecting children and adults from chicken pox.

The MMA also wanted to remind parents that chicken pox can be a serious illness. Before the vaccine, nearly 500 children died from the disease each year. (The vaccine has reduced the risk of death by up to 97 percent.) In addition, people who have had chicken pox are at risk of developing shingles later on in life. Pregnant women who get chickenpox are at risk for serious complications. For example, 10 percent to 20 percent of pregnant women



© Maria Dragan - Fotolia.com

Doctors are concerned that the antivaccine movement is leading parents to make choices that could harm their children.

who get chickenpox develop pneumonia, with the chance of death as high as 40 percent. If a pregnant woman gets chickenpox while in the first or early second trimester of pregnancy, there is a small chance that the baby could be born with birth defects. Newborns whose mothers develop chickenpox rash from five days before to two days after delivery are at risk for chickenpox shortly after birth, with the chance of death as high as 30 percent.

“There is no controversy about this among pediatricians and other physicians. The vaccine is far safer,” says Linda Van

Etta, M.D., an infectious disease specialist for St. Luke’s Hospital in Duluth and the MMA’s spokesperson on the issue. “Vaccines are the victim of their own success. Parents are becoming complacent because we rarely see little babies or children dying of chicken pox, diphtheria, or tetanus anymore.”

An Associated Press analysis published in November showed that 6.5 percent of Minnesota children don’t have all their vaccines—the third highest rate in the country.

State Cuts Nonemergency Care for Noncitizens

As a result of state budget cuts, some Minnesota immigrants have lost their coverage for nonemergency care. As of January 1, the Emergency Medical Assistance program no longer covers outpatient and nonemergency inpatient services in-

cluding doctor and clinic visits, outpatient pharmaceuticals, and care for chronic diseases.

Coverage is now limited to treatment provided in an emergency department or inpatient care that is connected with an emergency department admission. Maternity care is also covered.

Emergency Medical Assistance is a state program for noncitizens who are not eligible for Medical Assistance because of their immigration or sponsorship status. If you have questions about how the changes affect your patients, contact the state’s provider call center at 651-431-2700 or 800-366-5411.

Medicaid Audits to Begin this Year

An auditing process for Medicaid similar to the process already in place for Medicare will be rolled out in Minnesota and other states this year. The goal is to root out errors, fraud, waste, and abuse.

The process likely will involve having approved contractors review claims from physician offices, hospitals, and medical equipment suppliers that already have been paid.

Between January and June 2011, Medicare auditors recovered \$451.3 million in overpayments and corrected \$78.5 million in underpayments, according to the Centers for Medicare and Medicaid Services. The audits are expected to save the Medicaid program \$2.1 billion over the next five years.

For more information, visit mnmed.org/RAC.

ALERT !

Help Ensure the Provider Tax Repeal

The MMA is asking physicians to thank their lawmakers for repealing the provider tax and remind them to keep the promise they made when they voted to get rid of it last year.

Lawmakers agreed to phase out the provider tax, repealing it altogether in 2020. The phase-out is scheduled to begin in 2013, but the full repeal is contingent on lawmakers not adding new programs that are paid for by the tax through the Health Care Access Fund.

Visit mnmed.org/alert and use our automated system to send an email to legislators and Gov. Mark Dayton.

MMA IN ACTION

Happenings around the state.

MMA Director of State and Federal Legislation Dave Renner has been elected vice chair of the AMA Advocacy Resource Center (ARC), a partnership between the AMA and state medical societies. The ARC provides the MMA and other state medical associations with resources to address emerging issues important to physicians. It is staffed by seven attorneys with expertise in health law and state legislatures.



Dave Renner

A three-part series discussing pharmaceutical company payments to physicians in the *St. Paul Pioneer Press* in December drew a response from MMA President Lyle Swenson, M.D. In a letter to the editor published Sunday, January 15, Swenson said the articles fostered an unwarranted distrust of physicians among patients by implying that all physician-industry relationships are somehow inherently unethical.



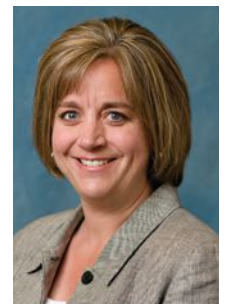
Lyle Swenson, M.D.

On January 6, Karolyn Stirewalt, MMA policy council, gave a presentation on the Medicare Recovery Audit Contractor program to providers at Essentia Health in Duluth.

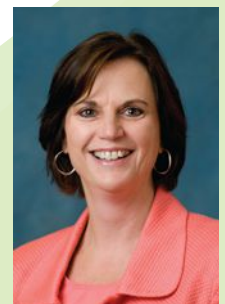


Karolyn Stirewalt

Janet Silversmith, MMA director of health policy, and Rebecca Schierman, MMA manager of quality improvement, met with staff from the Minnesota departments of Health and Human Services last month to discuss health care home certification and recertification. Silversmith and Kathy Messerli, director of member relations and education, also gave a presentation on health care homes to physicians at Glencoe Regional Health Services. The clinic and hospital are currently considering becoming a certified health care home. The presentation focused on the basic requirements for starting a health care home and payment issues.



Janet Silversmith



Kathy Messerli

VIEWPOINT

| by David Thorson, M.D.

Moving Forward

When Steve Jobs returned to Apple in 1997, he killed off several products in order to focus the company on doing what it does best.

After sitting in meetings with product people for weeks, Jobs had heard enough about why the company had so many versions of the Macintosh computer. “Stop, this is crazy!” he is reported to have said in the middle of one meeting. In his biography of Jobs, author Walter Isaacson goes on to describe how the Apple founder stepped up to the whiteboard and drew a simple four-quadrant chart with two headings at the top (consumer and pro) and two along the side (mobile and desktop). The company should have one great product for each quadrant, Jobs said. This simple plan was the start of Apple going from near-death to becoming the most valuable technology company on the planet.

Although cutting through the noise of the many worthwhile things one could do to focus on a small set of priorities is not easy, it’s a task the MMA has taken on in recent weeks. Health care’s footprint is so large and the interests of our members are so diverse that there’s no shortage of things we could do. In fact, when we surveyed members this summer about what our priorities should be, we presented them with more than 60 possibilities ranging from improving health literacy to malpractice re-

form to decreasing chronic illness. We came up with this list by considering discussions in the community and at previous MMA activities.

Staff and the Board of Trustees then ranked items based on the survey results and factors such as whether there is a need for such work, whether addressing a particular topic will advance the MMA’s goals of making Minnesota the healthiest state and the best place to practice medicine, whether there is broad membership support, whether MMA involvement will matter, whether the MMA has a unique role to play, and whether the MMA can really make a difference.

Winnowing the list was hard because we’d love to see positive change in all of the areas mentioned. Poverty, for example, is a major determinant of health. But is it really feasible, and the best use of physicians’ time and dues money, for the MMA to address its root causes? In the end, we picked these six areas on which to concentrate:

- Helping physicians to improve the quality of clinical care for patients with chronic illness, with special attention to the impact of racial and ethnic disparities;
- Ensuring all Minnesotans have access to care by increasing the state’s primary care workforce;
- Reducing the complexity of payers’ prior authorization processes;

Health care’s footprint is so large and the interests of our members are so diverse that there’s no shortage of things we could do.



Photo by Steve Weverka

David Thorson, M.D.
Chair, MMA Board of Trustees

- Promoting new and innovative payment and delivery models that recognize the value of care rather than the volume of care;
- Promoting high professional standards for physicians and protecting their professional interests; and
- Improving the culture of medicine by promoting physician collegiality and networking opportunities.

This doesn’t mean the MMA will be mute on other issues important to physicians. We will just need to balance our desire for focus with our need to respond to the unexpected issues that arise. And that means that we will say no more often and let others take the lead in some areas. By doing this, we will lay the groundwork for success in our chosen areas and enhance our ability to make a stronger case for the value of MMA membership.

Responding to Tough Times

A University of Minnesota Medical School perspective on the impact of the recession.

By Aaron L. Friedman, M.D.

The University of Minnesota Medical School, like all organizations both public and private, has been affected by the recession. Over the past three fiscal years, state funding for the medical school has been reduced by \$14.2 million. In addition, the Minnesota Department of Health's funding for Medical Education and Research Costs (MERC), which compensates our hospital and clinic partners for a portion of the costs of the clinical training of our residents, has been cut by \$32.1 million for this biennium. Meanwhile, competition for federal research dollars has intensified and federal funding levels have remained stagnant against inflation, at best.

We've responded to the tough economic times and funding cuts in a number of ways. We started by taking a closer look at ourselves and how we operate and then took steps to strengthen our overall financial position. First and foremost, leaders at the school eliminated a significant deficit. As of 2009, we had a recurring deficit of \$12 million, the result of commitments to maintain a level of excellence that were made based on certain assumptions about state funding and our ability to obtain grants, philanthropic gifts, and outside funding. We fell short of matching revenue to expenses for a short period of time; but with belt-tightening, we've returned to a state where our revenue equals or exceeds our expenses annually. This approach has been effective for the short term; however, it will not be effective in the long term as we try to attract the best faculty and students in what is a very competitive academic medicine marketplace.

As a part of our effort to eliminate the deficit, we streamlined our administrative processes. Since 2009, we've trimmed our administrative budget by more than 12% by cutting staff in the Dean's and Education offices by 14 full-time employees, and we continue to strive for increased administrative and operational efficiency.

Impact on Future Physicians

We have held to our commitment that cuts would not be felt directly by students in the classroom, researchers in the laboratory, or physicians and patients in our clinics and hospitals. We have, however, had to cut programs that could affect

the future workforce.

We've had to limit the size of the cohort in our Rural Physician Associate Program (RPAP). RPAP provides a unique opportunity for third-year medical students to explore primary care in rural Minnesota—in some of the areas of the state where there is the greatest need for doctors. Throughout its 40-plus years of existence, RPAP has had incredible success: 75% of the students who take part in the program go on to practice primary care; more than 65% stay in Minnesota; 56% work in rural locations somewhere in the United States, and almost 38% work in rural practices in Minnesota. Placing limits on RPAP's cohort size now could affect the future supply of primary care physicians, in particular, those willing to work in underserved rural areas.

We've also been forced to trim the budget of our Minnesota Future Doctors program by 60%. Through this program, college students from under-represented communities are prepared for successful admission to medical school. Of the 38 students who have completed the program and gone on to apply to medical school, 36 were accepted, 24 at the University of Minnesota Medical School; currently, 16 are first- and second-year students at our Twin Cities and Duluth campuses.

In addition to feeling the effects of reduced direct support from the state, the medical school also has felt the effects of the recession through cuts to the MERC Fund, which is funded in part by state general funds. The MERC Fund has provided approximately \$60 million a year to nearly 600 sites around the state that are involved in educating future physicians and other health care providers. However, last session the Legislature cut its funding for MERC by more than half.

The impact of cutting MERC funding so significantly is still unclear; but we do know that residency slots in some programs already have been eliminated as a result. In other words, these hospitals and clinics are not able to take our students anymore.

Financial pressures on our graduate medical education programs are also indirectly affecting our undergraduate medical education programs. Although we have not cut support for

Rethinking Health Care Labor

Why hasn't health care experienced the same productivity gains as other sectors of the economy?

By Robert Kocher, M.D., and Nikhil R. Sahni, B.S.

Of the \$2.6 trillion spent in 2010 on health care in the United States, 56% consisted of wages for health care workers. Labor is by far the largest category of expense: health care, as it is designed and delivered today, is very labor-intensive. The 16.4 million U.S. health care employees represented 11.8% of the total employed labor force in 2010. Yet unlike virtually all other sectors of the U.S. economy, health care has experienced no gains over the past 20 years in labor productivity, defined as output per worker (in health care, the “output” is the volume of activity—including all encounters, tests, treatments, and surgeries—per unit of cost). Although it is possible that some gains in quality have been achieved that are not reflected in productivity gains, it's striking that health care is not experiencing anything near the gains achieved in other sectors. At the same time, health care labor is becoming more expensive more quickly than other types of labor. Even through the recession, when wages fell in other sectors, health care wages grew at a compounded annual rate of 3.4% from 2005 to 2010.

Complicating this picture is the expansion of health insurance coverage to 34 million additional people over the next 10 years under the Affordable Care Act (ACA).¹ This increase in the population of insured Americans will expand demand and the need for labor—potentially to the point where labor becomes scarce and, therefore, even more expensive. If we add these new beneficiaries to the health system and expand the

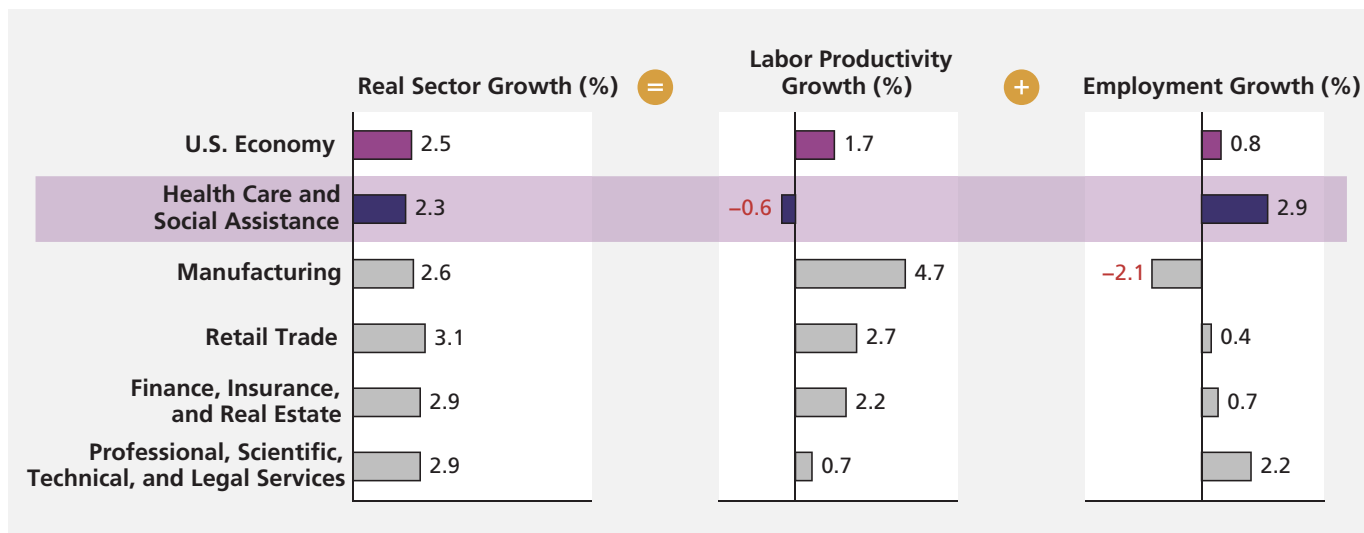
workforce proportionally while retaining today's labor structure, total health care costs will increase by \$112 billion, or 13%. Therefore, to be successful, any effort to slow the rate of growth of health care spending will require a change to the labor structure.

Standing in the way, however, is the inherent conflict between the federal goals of slowing that rate of cost growth and creating jobs in the health care system. President Barack Obama recently announced that health care is a major area of job creation, and we've seen 12% job growth in health care over the past five years. A recent report by the McKinsey Global Institute notes that for the United States to return to full employment, as many as 22.5 million jobs would need to be created, with 5.2 million, or 23%, in the health care sector.² Over the past decade, health care has been one of the primary drivers of job growth in the United States. Unfortunately, these jobs have been added in part because the health system has not improved its productivity at the same rates as other sectors.

Increasing labor productivity has been the key feature distinguishing the U.S. economy from other developed economies. Over the past 20 years, our real gross domestic product (GDP) grew 2.5% annually, with total employment contributing 0.7% and labor productivity the remaining 1.8%. In comparison, the real “value added” of the health care sector, measured as the contribution of the industry's labor and capital to its gross output and to overall gross GDP, grew at 2.3%, with

Figure

Real Sector Growth* (Compound Annual Growth Rate), Broken into Labor Productivity Growth and Employment Growth in Various Sectors of the U.S. Economy, 1990–2010.



*Real sector growth is defined as the value added by the industry to the gross domestic product. Data are from the Bureau of Labor Statistics and the Bureau of Economic Analysis.

total health care employment contributing 2.9% while labor productivity actually decreased by 0.6% annually. In contrast, other industries experienced substantial growth in labor productivity (Figure). Aside from health care, only education and defense showed no aggregate gains in productivity. Although it's possible that there were unmeasured gains in quality deriving from technological improvement, as in the case of eye surgery, it is highly unlikely that after such effects were accounted for, labor productivity in health care would approach that of other sectors. Until the productivity adjustments to Medicare were added as a result of the ACA—an effort to recapture overpayments for one-time expenses on buildings or capital equipment that have been inappropriately included in annual inflation adjustments—only weak incentives existed to drive labor productivity. As a result, most efforts to tackle labor productivity have focused on eking out small improvements in approaches to nurse staffing and reducing average hospital lengths of stay by a few hours.

Improving the labor structure in health care can be achieved in three ways: reducing the number of workers, lowering wages, or increasing productivity. The first option is a crude approach generally reserved for recessions, though employment in the health care sector continued to increase during the most recent recession. Wages can be lowered by either reducing current wages or replacing current workers with lower-cost (less skilled or more narrowly skilled) workers who can produce the same output. The field of law has gone through such a transition, with the number of jobs for paralegals and legal assistants growing 2.5 times as quickly as that for attorneys in the 2000s.²

Yet it is the final, and realistically most viable, option that provides the greatest return. If the health care sector is to achieve even the average improvement in labor productivity seen in the

overall U.S. economy, we will need to redesign the care delivery model much more fundamentally to use a different quantity and mix of workers engaging in a much higher value set of activities. (Although some activities, such as feeding patients and tending to their hygiene, may be impossible to accelerate, productivity is improved when these activities are performed by lower-cost but capable labor. Approaches that encourage delegation of tasks from physicians and nurses to other workers—for instance, transferring postsurgical care from surgeons to physician assistants—provide opportunities for additional savings and increased productivity.) This solution implies eliminating myriad time-wasting, low-value activities; increasing our use of technology, data, evidence, and teams; increasing standardization to avoid rework; and relying on evidence-based personalized care to avert complications.

A large obstacle to such a wholesale redesign is the complexity of the federal and state reimbursement rules and requirements for scope of practice, licensure, and staffing ratios. One example of the current inflexibility is the requirement that all imaging centers have a physician on hand at all times if intravenous contrast may be administered, owing to the 0.1% probability that a patient will have a severe, life-threatening allergic reaction.^{3,4} Surely, other health care professionals could be trained to respond effectively to such an allergic reaction, which would liberate these physicians to fill higher-productivity roles. In addition, though providers are integrating new technology into their systems, they have no incentive in fee-for-service reimbursement for improving productivity by converting inpatient encounters to virtual visits, incorporating remote monitoring, or managing treatments with lower-cost care coordinators. Although a Current Procedural Terminology code was created to permit billing for e-visits, it requires the patient to initiate the online visit. Hence, communication be-

tween physicians and patients—such as an email follow-up after an office visit—does not meet the criteria, a limitation that hinders the uptake of technology.

Every other major sector of the economy has managed to simultaneously improve quality and consumer satisfaction and reduce costs, which suggests that the same should be achievable in the health care sector once the incentives are strong enough. Moreover, in industries in which productivity is improved, workers' wages grow, as they capture some of the value created by additional productivity.

It is critical that policymakers and health plans focus on revamping their reimbursement approaches to create stronger incentives to increase labor productivity. The combination of a risk-based payment model tied to outcome goals, on the one hand, and coding rules that are appropriate regardless of how providers achieve their clinical goals, on the other, could inspire the implementation of innovative, technology-based, analytically informed approaches that increase productivity. Alternatives that are not oriented toward substantial improvements in labor productivity will inevitably lead to a future in which health care salaries come under extreme pressure, as payers and policymakers resort to traditional levers of market-basket cuts and utilization controls. Therefore, as the system embarks on initiatives such as accountable care organizations, patient-centered medical homes,

and bundled payments, it is imperative to work to optimize both patient outcomes and labor productivity. **MM**

Robert Kocher is with the Engleberg Center for Health Care Reform, Brookings Institution, Washington, D.C. Nikhil Sahni is with Harvard Business School and the John F. Kennedy School of Government at Harvard University, Cambridge, Massachusetts.

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TOUGH TIMES continued from p. 33

curricular activities, we have had a tough time meeting our goals with regard to offering students clinical training experiences. Nationally, the trend is to encourage students to engage in patient interactions earlier in their medical careers. Our curriculum now requires first-year students to spend one afternoon per week gaining clinical experience in a range of care settings. This experience better prepares them for their third- and fourth-year clerkships and helps them appreciate the breadth of health care systems. Offering such experiences to more students means we need more preceptors. But practicing physicians who are themselves feeling the effects of the recession, in addition to their own system pressures, often feel they cannot afford to spend time teaching.

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Impact on Research

The recession has also created a stressed environment for research. National Institutes of Health (NIH) funding has not kept up with inflation, and there is increased competition for each grant. In 2009, the American Recovery and Reinvestment Act (ARRA) provided unprecedented levels of funding to the NIH, which helped many institutions including ours by temporarily boosting our research funding pool for shovel-ready projects. As a school, we were granted just over \$63.2 million in ARRA awards. When the last of these funds are exhausted in the 2013 fiscal year, the need to find new research dollars will be as critical as ever.

State-level funding cuts caused us to halt some research activ-

ities including programs in allergy and anesthesiology. It's difficult to calculate the consequences of eliminating these programs—we never know what opportunities will be missed by halting research in specific areas. But certainly, the University of Minnesota is unlikely to be nationally known for work in these two areas when we are not making major contributions to them. As a research institution, we cannot do everything, and these were the strategic choices we made in order to maintain solvency.

This period of fiscal uncertainty has brought to light the importance of the medical school's many relationships with outside organizations. More than ever before, we realize how important it is to partner with industry and others in the community on education and research. And we realize that if these partnerships are to be successful, we will need to do an even better job helping the public understand why these relationships are so critical.

I am proud to say that we have kept our focus on preparing future physicians, conducting cutting-edge research, and providing excellent patient care despite the stressors of the recent tough economic times. Yet we recognize that tough times call for more collaboration and new ideas. In order to ensure that Minnesota has well-trained physicians and researchers working toward tomorrow's treatments and cures, all of us in the state—the medical schools, practicing physicians, hospitals and clinics, industry, and communities—will need to work together. **MM**

Aaron Friedman is dean of the University of Minnesota Medical School and vice president for health sciences at the university.

The Physician's Role in Health Care Spending

By Janet Silversmith

■ Physicians must weigh their obligation to provide their patients with the best care possible against their obligation to be good stewards of health care resources. Given the rising cost of health care in the United States and Minnesota, striking the right balance has become more of a challenge. This article describes national and state health care spending trends. It also describes the State of Minnesota's Provider Peer Grouping program and the health plans' total cost of care analyses, two initiatives that are being used to evaluate the cost of care delivered by various provider groups and highlight areas for improvement.

Physicians are obligated to advocate for their patients and provide them with the best care possible. They also have a professional responsibility to serve as ethical stewards of health care resources.¹ Balancing these interests is neither easy, nor is it without controversy. Yet the fact that health care costs continue to rise demands that physicians pay greater attention to the tests and treatments they order.

Although they cannot single-handedly solve the problem of rising health care costs, physicians do wield significant control over the utilization of many health care services and, as such, are in a unique position to help mitigate costs. Providing physicians with more useful and relevant information about the care they deliver and the cost of that care could lead to practice-improvement opportunities. There are legitimate concerns about the ethics of factoring cost information into choices about care and about how new models of health care financing and payment might alter care decisions. However, those concerns are

beyond the scope of this article. Rather, this article provides an overview of health care spending trends in the United States and Minnesota and identifies some of the emerging approaches aimed at arming physicians with information about their performance with regard to cost.

Public and Private Health Care Spending

The cost of health care is an obvious source of concern for individuals, businesses, and governments. Figure 1 illustrates the reality facing individuals—that health insurance costs have risen much faster than earnings. Between 1999 and 2010, the average annual rate of increase in health insurance premiums in the United States was 11.5%, and the average annual rate of growth in workers' contributions to premiums was 13.25%. By comparison, workers' earnings increased, on average, only 3.5%, while general inflation increased by 2.6% annually.²⁻⁴

Both the federal and state governments are struggling to absorb rising health care costs. In Minnesota, health and human services spending, of which Medical Assistance (the state's version of Medicaid) is the most significant component, accounts for the second-largest spending category, behind K-12 education. In the 2012-2013 budget, health and human services accounts for one-third of all state expenditures, up dramatically from its 20% share in 1996-1997.⁵

Total health care spending* in Minnesota was \$36.4 billion in 2009,[†] which was a 3.8% increase over spending in 2008. In 2009, the state did, however, see the slowest rate of spending growth in 12 years (Figure 2). This was attributed to a decrease in the rate of growth in spending in the private insurance market, which was down to a mere 1.4% in 2009 compared with a previous average of 7.9% a year. Much of the 7.4% growth in public-sector spending was driven by recession-related increases in enrollment in programs such as Medical Assistance and MinnesotaCare.⁶

Spending differences between public and private payers in Minnesota and the United States may reflect differences in distribution of insurance coverage by payer type, payment rates, and covered services. Figure 3 illustrates some of those differences. It is interesting to

*Spending is calculated based on national comparisons of health consumption expenditures, which represent spending for all medical care rendered during the year, and is the sum of personal health care expenditures, government public health activity, and government administration and the net cost of private health insurance.

†The most recent year for which both federal and state data are available.

note that approximately 67% of Minnesotans have private health coverage.⁷ The fact that Minnesota exceeds the national average in the percentage of the population that receives coverage through an employer may offer some explanation as to why Minnesota's private spending outpaces that of the rest of the country.⁸ With respect to public spending, Medicare spending nationally outpaces Medicare spending in Minnesota even though the proportion of the population enrolled in Minnesota (14%) is somewhat higher than the national average (12%). Studies have demonstrated that differences in utilization rates for Medicare services, driven by factors generally unrelated to age or severity of illness, go a long way in explaining the lower Medicare costs in Minnesota compared with other parts of the country.⁹⁻¹¹ Medicaid spending in Minnesota does outpace national Medicaid spending, generally because Minnesota spends more on long-term care services and offers a broader benefit package for enrollees.¹² Only about 8% of Minnesotans have Medicaid as their primary source of coverage, yet it represents nearly one-fifth of total health care spending.^{6,7}

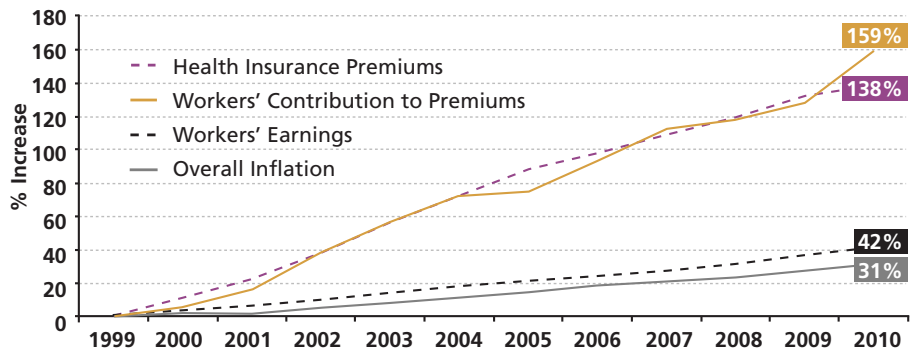
Where the Dollars Go

As a share of the overall economy, health care accounts for 14.1% of the total in Minnesota, compared with 16.5% for the United States. From 1980 to 2009, the share of the U.S. economy dedicated to health care grew by 94%.¹³

On a per capita basis, health care spending continues to increase, as shown in Figure 4. Although spending in Minnesota is below the national average, it approached approximately \$7,000 per person in 2009.⁶ A recent analysis of per capita personal health care spending, which excludes payments made for government public health activity, government administration, and the net cost of private health insurance, by state found that Minnesota actually exceeded the national average by 9% and ranked 15th overall.¹⁴ Among the demographic and economic characteristics the authors identified as being more common among

Figure 1

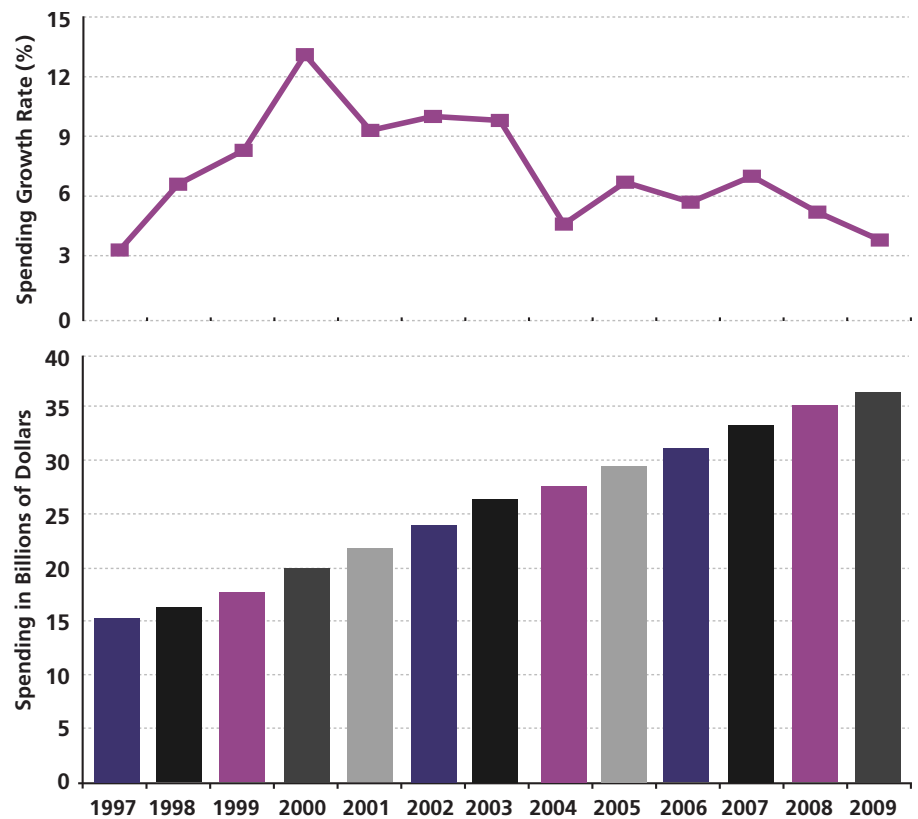
Cumulative Increases in Health Insurance Premiums, Workers' Contribution to Premiums, Inflation, and Workers' Earnings, 1999-2010



Sources: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 1999-2010; Bureau of Labor Statistics, Consumer Price Index, U.S. City Average of Annual Inflation (April to April), 1999-2010; Bureau of Labor Statistics, Seasonally Adjusted Data from the Current Employment Statistics Survey, 1999-2010 (April to April)

Figure 2

Trends in Health Care Spending and Rate of Growth in Minnesota



Sources: Minnesota Department of Health. Minnesota Health Care Spending and Projections, 2009. Minnesota Department of Health, Health Economics Program, June 2011.

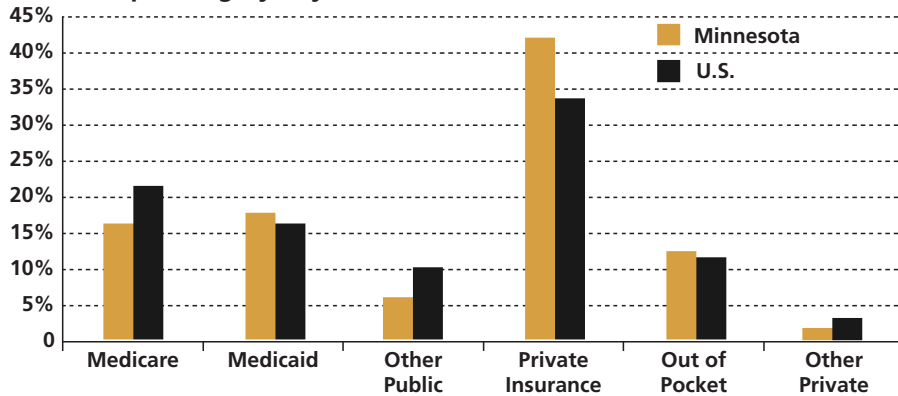
the 10 states with the highest per capita personal health spending (Massachusetts, Alaska, Connecticut, Maine, Delaware, New York, Rhode Island, New Hampshire, North Dakota, and Pennsylvania) were high personal income, a higher-than-average percentage of women ages 20

through 44 (those likely to use maternity care), and a somewhat higher proportion of elderly residents.¹⁴

Macro-level perspectives on health care spending are instructive, but greater detail is needed in order to better manage costs. A breakdown of Minnesota's health

Figure 3

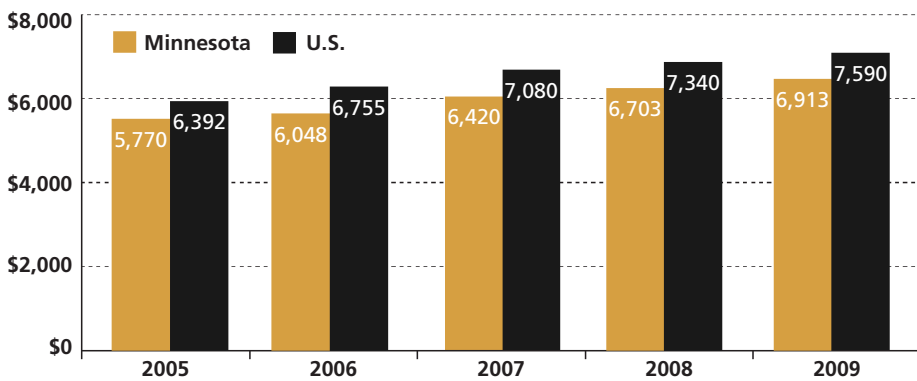
Share of Spending by Payer: Minnesota and the United States, 2009



Sources: Minnesota Department of Health. Minnesota Health Care Spending and Projections, 2009. Minnesota Department of Health, Health Economics Program, June 2011.

Figure 4

Per Capita Spending: Minnesota and the United States, 2005–2009



Sources: Minnesota Department of Health. Minnesota Health Care Spending and Projections, 2009. Minnesota Department of Health, Health Economics Program, June 2011.

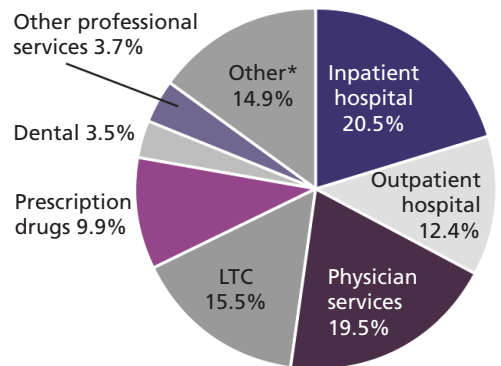
care spending by type of service is illustrated in Figure 5. Physician services accounted for 19.5% of overall spending in 2009, increasing less than one-half of one percent over the 2008 level. The economic slowdown also appeared to have slowed the rate of increase in spending on hospital services, while the rate of growth in prescription drug spending was higher than in previous years.⁶ Although spending on physician services accounted for less than one-fifth of total spending, physicians certainly influence other areas of spending through prescribing patterns, hospital admissions, and orders for tests, services, and equipment.

The patient perspective offers yet another vantage point for examining health care spending. According to the Agency for Healthcare Research and Quality, just 5% of the population accounts for almost half (49%) of total health care expenses.

Fifteen health conditions account for 44% of total health care expenses (with cancer and heart disease topping the list on a per person cost basis). And the cost of care for patients with multiple chronic conditions is seven times that of a patient with only one chronic condition.¹⁵ Not surprising, age is a strong predictor of higher health care spending. In fact, individuals between 65 and 79 years of age (approximately 9% of the total population) accounted for 29% of the top 5% of spenders. And people 80 years of age and older (about 3% of the population) accounted for 14% of the top 5% of spenders.¹⁵ Figure 6 illustrates average per capita spending by age group, with a noticeable jump occurring at age 55, suggesting significant challenges as the baby boomers age.

Figure 5

Minnesota Health Care Spending by Service Category, 2009



*Other includes public health, DME, correctional health, Indian Health Services, TRICARE (4.4%); chemical dependency and mental health (2.5%); and, health plan administrative expenses and revenues in excess of expenses (7.3%).

Sources: Minnesota Department of Health. Minnesota Health Care Spending and Projections, 2009. Minnesota Department of Health, Health Economics Program, June 2011.

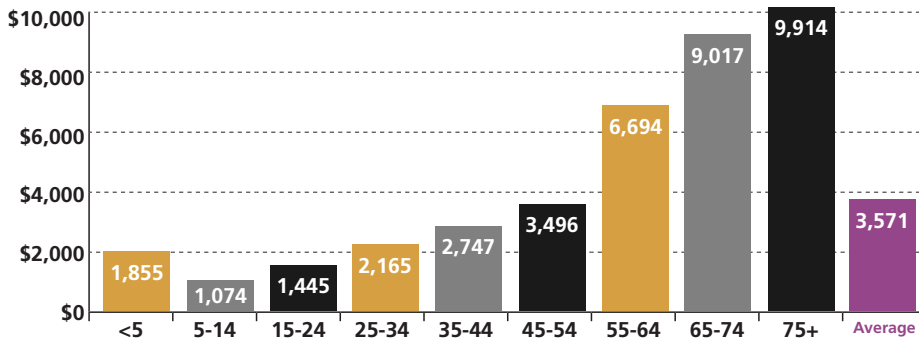
Two Minnesota Cost Measurement Initiatives

There is increasing momentum for analyzing the cost of care at the clinic and/or physician level. Two initiatives that warrant particular attention are the State of Minnesota’s Provider Peer Grouping (PPG) program and the health plans’ total cost of care (TCOC) analyses.

The PPG program was adopted by the Legislature as part of the 2008 health care reform act. The law requires the Minnesota Department of Health to develop “a uniform method of calculating providers’ relative cost of care, defined as a measure of health care spending including resource use and unit prices, and relative quality of care.”¹⁶ The purpose of the law is to encourage patients to use hospitals and clinics identified as high-quality, low-cost providers of care. The data sources for the cost of care analysis are commercial insurance, Medicaid, and Medicare claims and payment data submitted by payers. Two types of cost analyses for physician clinics are to be done. The first measures total costs for all physician, hospital, ancillary, and pharmacy services provided to patients attributed to a particular primary care or multispecialty clinic (more information is available at www.health.state.mn.us/healthreform/peer/index.html).

Figure 6

U.S. Health Care Spending by Age, 2004



Source: Tom Stinson, Minnesota State Demographer. July 2008 presentation, “Minnesota’s Economics and Demographics Looking To 2030 and Beyond,” which references Agency for HealthCare Research and Quality, Medical Expenditure Panel Survey data for per capita spending by age group in the Midwest. Excludes spending for long-term care institutions.

The second is a measure of the cost for an episode of care for patients with diabetes, coronary artery disease, asthma, and congestive heart failure.

The law requires public reporting of the results and incorporation of the results in the insurance products offered to state employees and in specific products offered by commercial health plans.¹⁷ Recent announcements by the Minnesota Department of Commerce indicate that the state is also looking to incorporate the PPG results in the state health insurance exchange, which is under development.¹⁸

Implementing PPG has been very challenging, and project timelines have been altered several times. Initial results distributed to hospitals in September 2011 were found to be flawed and were ultimately withdrawn. Physicians should continue to monitor the progress of PPG, as its impact could be significant.

The second initiative that physicians should be aware of is the effort of health plans to measure physicians, particularly those who work in integrated systems, primary care clinics, and multispecialty clinics, on their total cost of care (TCOC). The concept of TCOC has been around for several years. Increasingly, it is being used to determine shared-savings and/or risk for new payment models. TCOC measurement methodologies can vary dramatically from plan to plan, making interpretation of the results a complex and frustrating task. Although there are efforts underway to develop standard cost-of-care

measures by the National Quality Forum and the Centers for Medicare and Medicaid Services, it is difficult to predict when health plans will adopt such standards.

Discussion

Although there is much debate about the methodologies used in these efforts, these attempts at assessing cost raise expectations that physicians will play a greater role in controlling the cost of health care. The fundamental issue for physicians—assuming the results of any analyses are valid and reliable—is the utility of the information. Can these cost-of-care analyses generate information that is relevant and useful? Will they enable physicians to make changes that improve care and reduce costs? Given the trajectory of health care spending in the United States and Minnesota, efforts to get better information about the cost and utilization of health care resources are likely to continue. That work merits the support and involvement of physicians.

The issue of health care costs is complex, and many factors that affect an individual’s health status are clearly beyond their physician’s control. But physicians should be aware of cost and manage spending as effectively and efficiently as possible. For that reason, physicians should welcome the data on cost emerging from these efforts.

MM

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Rescued by the Safety Net

How Government-Sponsored Programs Eased the Pain during the Recession

By Gilbert Gonzales, M.H.A., Heather Dahlen, M.A., and Lynn A. Blewett, Ph.D.

■ The recent recession had a significant impact on the nation and Minnesota both in terms of the number of jobs lost and the loss of employer-sponsored health insurance (ESI). In this article, we present national and Minnesota-specific data on the loss of ESI. We also explore how government-sponsored programs provided a safety net that enabled many people with low incomes to retain health insurance coverage, lessening the recession's impact in Minnesota. We conclude with general comments about the role of the safety net in a health care system in which the majority of people have health care coverage through voluntary employer-based programs.

The Great Recession may have officially ended in June 2009,¹ but its effects are still being felt today as people slowly get back to work.* Unemployment in the United States peaked at 10.1% in October 2009;² in Minnesota, unemployment peaked in May 2009, when some 250,000 people reported being out of work (Figure 1).³ That same year, 5 million Americans lost their employer-sponsored health insurance (ESI).⁴ This loss in ESI was a result of people losing their jobs, employers dropping ESI, and workers no longer being able to afford the coverage that was offered because of stagnant incomes and increases in premiums.²

Working-age adults were hit the hardest, with the most noticeable increases in uninsurance occurring among whites, native-born citizens, and residents of the Midwest and South.⁵ And men more than women were affected. The gender gap in health coverage during the recession mirrors the gender gap in employment, with women reporting both higher rates of employment and insurance coverage than men (Table).⁶

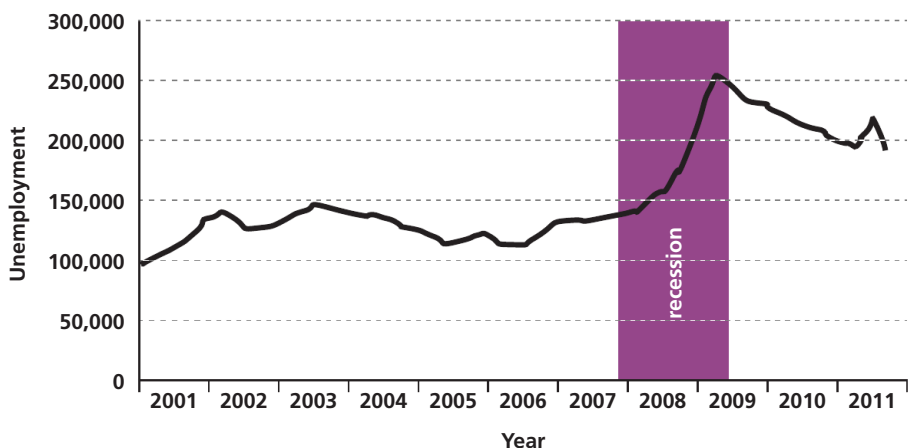
Key Federal Legislation

Federal legislation, in particular the American Reinvestment and Recovery Act (ARRA) and the Affordable Care Act (ACA), eased the burden for people who lost their health coverage. The ARRA, signed by President Barack Obama in early 2009, provided a subsidy to cover 65% of COBRA premiums for recently terminated workers so that they could retain health insurance coverage through their former employer. COBRA allows individuals to retain their ESI for up to 18 months after they leave a position

as long as they pay the full price of the premium. A 2010 survey of 3,033 adults (age 19 to 64) found that for those who lost their jobs and ESI, 14% continued their coverage through COBRA.⁷

The ARRA also temporarily increased the federal share, or the federal matching assistant percentage (FMAP), for state Medicaid programs as an incentive for states to continue providing coverage during budget shortfalls. The federal government, which had previously paid 50% of Medicaid expenditures in Minnesota, was paying 61.59%

Figure 1
Unemployment in Minnesota



Source: Minnesota Department of Employment and Economic Development

*The National Bureau of Economic Research officially determines the recession dates to be between December 2007 and June 2009.

Table

Employer-Sponsored Insurance (ESI) and Uninsurance Rates in Minnesota, by Sex (19 to 64 years of age)

Year	ESI Rate (%)				Uninsurance Rate (%)			
	Men	Women	Average	Difference	Men	Women	Average	Difference
2001-2002	76.8	78.5	77.7	1.7	10.8	6.0	8.4	-4.8**
2003-2004	73.3	76.8	75.1	3.5*	12.4	7.1	9.8	-5.3**
2005-2006	71.5	72.7	72.1	1.2	12.0	8.1	10.1	-3.9**
2007-2008	72.1	73.4	72.8	1.3	11.1	8.9	10.0	-2.2**
2009-2010	68.8	71.0	69.9	2.2	13.4	8.5	11.0	-4.9**

*Significant difference between men and women at the .05 level, 2-tailed test

**Significant difference between men and women at the .01 level, 2-tailed test

Source: State Health Access Data Assistance Center Analysis of the Census Bureau's 2010 Current Population Survey

during the first quarter of 2009. The federal matching rates under ARRA ranged from 61.59% in 11 states including Minnesota to 84.86% in Mississippi. As of January 2011, Minnesota had received approximately \$1.67 billion as a result of the increased FMAP. (The state received \$777 million in 2009 and \$895 million in 2010.)⁸

With the passage of the ACA in 2010, the federal government allowed states to expand the number of people on their Medicaid rolls in 2014, with the option of beginning that expansion in 2010. This early expansion provision enabled Minnesota to resolve the long-standing controversy over its General Assistance Medical Care (GAMC) program, which had provided state-funded health insurance coverage for an extremely vulnerable group of adults.

The GAMC program was established by the Minnesota Legislature in 1975 to provide health care assistance to low-income individuals not eligible for other public programs such as Medical Assistance, the state's Medicaid program, or MinnesotaCare, the state's subsidized health insurance program for the working poor. GAMC covered people who had very low incomes (less than 75% of the federal poverty level), was funded by state general fund dollars, and received no federal financial assistance. GAMC enrollees were often single male adults, averaging 45 years of age. They were primarily white, unemployed high school graduates with no immediate family who reported being "down on their luck." By 2010, GAMC provided coverage to approximately

30,000 Minnesotans.¹⁰

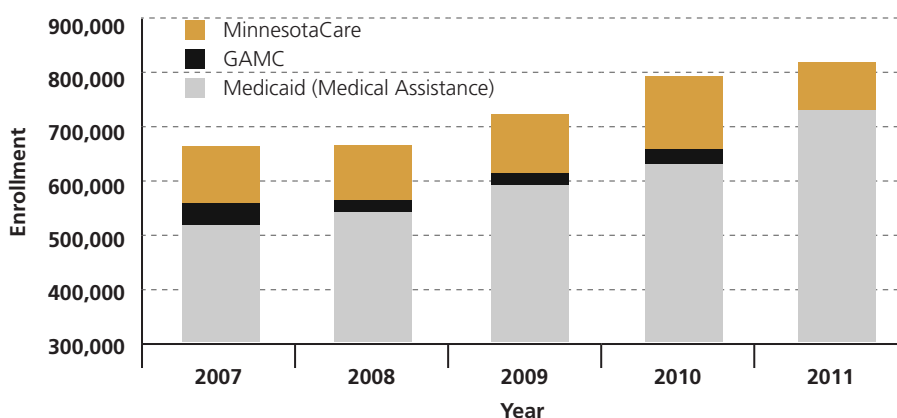
GAMC had been targeted for elimination since the early 2000s as a budget-saving measure.¹¹ In 2010, after then-Gov. Tim Pawlenty used his line-item veto authority to eliminate the program, the Republican governor and Democratic-Farmer-Labor legislative leaders reached an agreement to convert GAMC into a coordinated care delivery system, whereby hospitals would contract with the Department of Human Services to provide inpatient and outpatient care for GAMC patients for a monthly per-person payment.¹² Some critics of the proposal feared that the new design would limit access to care for a medically vulnerable population and force hospitals to provide care despite insufficient funding. By July 2010, only four hospitals had signed up to participate in the new program; payments to providers were projected to drop from \$288 million in 2009 to \$98 million in 2012; and monthly GAMC enrollment dropped

from 30,000 to 12,000 between June and September 2010.¹²

When Gov. Mark Dayton took office in January 2011, one of his first priorities was signing an order to expand access to Medical Assistance for low-income, childless adults with incomes at or below 75% of the federal poverty level (\$8,172 a year for one person in 2011) who were previously ineligible for federally funded programs. With this order, Minnesota became one of the first states to take advantage of the early Medicaid expansion. All GAMC enrollees were automatically converted to Medical Assistance in March 2011. By June 2011, Medical Assistance covered more than 720,000 low-income enrollees, of whom almost 85,000 were childless adults (Figure 2). To date, only Connecticut, the District of Columbia, and Minnesota have participated in the early Medicaid expansion, although several states plan to maintain coverage for low-income childless adults through existing Medicaid

Figure 2

Minnesota Health Care Programs



Source: Minnesota Department of Human Services Reports and Forecasts.

waiver programs.

Beginning in January 2014, all states will be required to expand Medicaid to all individuals and families with incomes up to 138% of poverty (approximately \$15,000 annual income for an individual). Under the Medicaid expansion, the federal government will pay 100% of the costs between 2014 and 2016; from 2016 to 2020, states will be required to pay 10% of the total expenditures. Until then, states will continue to receive their regular FMAP (in Minnesota's case, 50%).¹³

Discussion

Employer-sponsored insurance is a foundation of the U.S. health care system. Currently, 55.3% of all Americans obtain their health insurance coverage through an employer.¹⁴ The problem with such a system is that health insurance coverage rates depend on the state of the economy and the ability of local employers to offer coverage. When times are good and the economy is growing, employers are likely to offer coverage to their employees. For example, following the economic boom of the 1990s, in 2001-2002 the national ESI coverage rate was 70.1% for people 19 to 64 years of age; in 2009-2010, it was estimated at 60.8%.¹⁵ Comparable numbers for Minnesota show ESI at 77.7% in 2001-2002 and 69.9% in 2009-2010 (Table).¹⁴

Even in good times, a fair number of people are not able to obtain coverage through their employer and those who cannot afford coverage in the private market must look to the public safety net. Congress, through the passage of ARRA and the ACA, strengthened the health care safety net for those losing ESI and for those with no or low incomes. The early Medicaid expansion effectively enabled Minnesota to end its long-standing GAMC program while still meeting the needs of extremely vulnerable adults. Starting in 2014, Medicaid will provide health coverage for all individuals and families with incomes below 138% of the federal poverty level. An estimated 16 million Americans, including more than 250,000 Minnesotans, are projected

to benefit from the ACA and gain coverage through Medicaid.¹⁵

There is some concern that once the ACA is implemented, there will be an incentive for employers to stop offering health insurance coverage, as individuals will be able to qualify for either Medicaid or subsidies offered through the new health insurance exchanges. However, most experts predict stability in the ESI market in the near future, with declines in the rate of employers offering ESI ranging from close to zero to -4.5%.¹⁶ It is expected that the individual mandate, penalties for employers who do not offer ESI, tax credits for small firms that do offer ESI, and lower premium prices will help stabilize ESI rates.

In a system in which there is no universal health insurance coverage, the Medicaid program and providers such as federally funded Community Health Centers and local public hospitals are critically important. Given that an estimated 20 million people, including low-income adults not enrolled in Medicaid and undocumented immigrants ineligible for federal programs,¹⁷ will still be uninsured in this country following full implementation of the ACA, safety net programs and providers will remain essential to the U.S. health care system for some time. **MM**

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Improving the Health of the Homeless

Advice for Physicians

By Thokozeni Lipato, M.D.

■ Homeless individuals suffer from a constellation of health issues, experience barriers to medical care that are both recognizable and hidden, and score worse on measures of health outcomes than the general population. They differ to such an extent from the general population that homeless people should be viewed by clinicians as a unique patient population. Improving the health of this population is difficult for a number of reasons. This article explores those reasons. It describes common conditions affecting homeless people and discusses how patient-centered comprehensive primary care, collaboration between health care providers and social service organizations, and innovative delivery of medical respite services can result in better care for this population.

On a single night in 2010, nearly 650,000 people in the United States were homeless, according to the U.S. Department of Housing and Urban Development.¹ Approximately 62% of those individuals were in shelters. Around 37% were members of families. Fewer than 2% of the individuals counted that night met the criteria for being chronically homeless, which is defined as having a disabling condition and either being continually homeless for a year or more or having had at least four episodes of homelessness during the past three years. This illustrates the fact that many homeless individuals recently have been housed.

According to federal statistics, between October 1, 2009, and September 30, 2010, an estimated 1.59 million individuals spent at least one night in a shelter or transitional housing.¹ Of those, 62% were male, 58% were members of a minority group, approximately 22% were younger than 18 years of age, and less than 3% were 62 years of age or older.

Although that report shows the number of individuals in shelters increased only slightly from 2007 to 2010, the number of families that are homeless increased precipitously each year. There were roughly 93,800 more members of families who were homeless in 2010 than in 2007. This reflects the



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- 3) how to provide better care to homeless patients.

Target audience: Primary care physicians

Author

Thokozeni Lipato, M.D., is an assistant professor of medicine at the University of Minnesota.

Disclosures

Faculty have indicated they have no relationship which, in the context of their presentations, could be perceived as a potential conflict of interest.

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increased vulnerability of many families during the recent economic downturn. Although some have declared the recession technically over, the number of homeless individuals is predicted to increase. The National Alliance to End Homelessness estimates that between 2010 and 2013, 74,000 more people will experience an episode of homelessness.²

The number of homeless people in Minnesota has increased steadily since 1991. According to a statewide survey by the Amherst H. Wilder Foundation, more than 9,600 homeless individuals in Minnesota were counted during a single night in October 2009. Approximately 3,300 were adult males and 2,900 were adult females. Around 3,200 were children with parents, and approximately 230 were unaccompanied minors. Approximately 14% were veterans. An additional 600 individuals on Indian reservations in the state were identified as being homeless on that night.³

In order to account for individuals missed during the count, the Wilder Foundation estimated that 13,100 people were homeless on any given night in 2009. It also estimated that during 2009 1,455 family units experienced homelessness sometime during that year. Although nearly 70% of the homeless adults were in the seven-county Twin Cities metropolitan area, the number of homeless individuals in greater Minnesota is increasing. In 1991, 20% of homeless individuals were in greater Minnesota compared with 32% in 2009.³ This mirrors the national trend: 36% of homeless individuals counted in the 2010 HUD report were in suburban and rural areas.¹

It has been known for years that homeless individuals are more likely to die prematurely as compared with members of the general population. Researchers first discovered this more than 30 years ago when they identified a cluster of deaths from lung cancer in a common lodging house in Liverpool, England.⁴ A Stockholm study found that homeless men had a mortality ratio four times that of the overall population in Sweden.⁴ A Toronto study found the mortality rate

among homeless people to be of 876 per 100,000 person years. Another Canadian study showed that homeless people have higher mortality rates than the poorest individuals in the general housed population.⁵

Clearly, homelessness has negative effects on the health of individuals. With the number of homeless people increasing, many more physicians will likely encounter homeless individuals in their practices. To best serve them, physicians should become aware of the medical conditions that commonly affect homeless individuals and learn how to deliver care to this population. This article highlights many of those conditions and discusses ways physicians can meet the needs of this vulnerable population.

Identifying Homelessness

The first step in improving the health of homeless individuals is to identify them. Yet the majority of primary care clinics do not systematically inquire about or record the housing status of their patients. Furthermore, hospitals are not required to collect or report data on homelessness. The lack of a well-established definition of homelessness adds to the problem. Definitions of homelessness should be broad to encompass all those who do not have access to adequate housing. Inadequate housing is defined as that which damages or is likely to damage a person's health or threaten their safety or that fails to provide the personal amenities or support that a home normally affords.⁶ A rooming house, where tenants do not have their own bathroom or kitchen facilities, and where occupancy is not secured by a lease, is an example of inadequate housing.

It also is important to identify patients who are at risk for becoming homeless. Factors such as living in overcrowded conditions (more than two people per bedroom), living in a setting where there is ongoing domestic violence, and having a history of childhood sexual abuse, treatment in a detoxification unit, and hospitalization for mental illness are all potential predictors of future shelter use.⁷

Recognizing Common Medical Conditions

A number of medical conditions are more prevalent among the homeless population as compared with the general population. Here we highlight a number of them as well as advice on how to screen for and treat them.

■ Cognitive and Neurological Deficits

The rate of traumatic brain injury among the homeless is estimated to be five or more times greater than that in the general population.⁸ In Minnesota, 32% of homeless adults reported receiving a significant blow to the head that was followed by symptoms indicative of traumatic brain injury.³ Clinicians should obtain a thorough history of brain injuries and categorize those injuries according to their severity. Mild traumatic brain injury is defined as being dazed, confused, disoriented, or having loss of consciousness for less than 30 minutes, while moderate to severe injury is defined as losing consciousness for more than 30 minutes. Records of hospital admissions and emergency department visits can corroborate the history.⁸ In addition, there are several traumatic brain injury screening tools available including the HELP Traumatic Brain Injury Screening Tool. Individuals with a history suggestive of traumatic brain injury should be referred for neuropsychological testing and rehabilitation.

Epilepsy is often associated with alcohol use and being homeless for more than two years.⁹

In addition, several studies have shown an increased prevalence of cognitive impairment among homeless individuals. Burra et al. found 4% to 7% of homeless individuals who were administered the Mini Mental State Examination exhibited global cognitive deficits, with etiologies including prolonged substance abuse, traumatic brain injury, and mental illness.¹⁰ The Wilder Foundation found 33% of homeless adults in Minnesota reported having cognitive disabilities.³ The Repeatable Battery for the Assessment of Neuropsychological Status is a brief test

that can measure cognitive decline.

■ Mental Health Issues

That psychiatric disorders are prevalent in the homeless population is well-known. A study of the homeless in Western countries found alcohol and other drug dependence is the most common disorder. Major depression, psychotic illnesses, and personality disorders are also common.¹¹ In Minnesota, 14% and 19% of homeless adults were diagnosed with a drug or alcohol use disorder, respectively, and there has been a steady rise in the prevalence of serious mental illness among the homeless, from 20% in 1994 to 55% in 2009.³ In addition, homeless women had higher rates of suicide than women in the general population.⁵

Routine screening for depression using the Patient Health Questionnaire (PHQ-9) and for substance abuse with the Simple Screening Instrument for Alcohol and Other Drug Use (SSI-AOD) is important. Although most chemical dependency treatment is done in specialized centers, primary care providers can treat patients with opioid dependency with buprenorphine.^{12,13} However, many physicians have been slow to use buprenorphine, particularly with vulnerable patients. The lack of robust addiction medicine training in residency, poor dissemination of current evidence from addiction research into primary care, and the challenges of managing patients with complex psychosocial issues may be reasons for this.

Studies show that coordinated treatment and support for individuals with mental illness and substance abuse results in better clinical outcomes than care without case management.¹⁴ Clinics that lack the resources necessary for providing dedicated case management should collaborate with social service agencies and chemical dependency treatment centers. All homeless patients should be asked whether they have a caseworker who may be assisting them with housing and/or other services. Clinic staff should ask the patient's permission to communicate with these individuals, as collaboration can improve continuity of care.

■ Injuries

Being homeless puts people at risk of injury caused by violence. In Minnesota, 20% of homeless adults report being physically or sexually assaulted while homeless and 29% of women report being homeless in part because they were experiencing domestic abuse at home.³ Because of the dangers they are exposed to while homeless, individuals may worry about dying anonymously and undiscovered. Although health professionals will not be able to alleviate these worries altogether, they can and should address the issue of end-of-life care with homeless people. It has been shown that homeless people often have wishes and preferences regarding the end of life that are not addressed by health care providers.¹⁵ Homeless patients should be given the opportunity to complete advance directives. Clinics should diligently document patients' next of kin, which oftentimes may not be a relative. Asking "Who do you want me to call if you get sick and cannot make decisions for yourself?" is one way of eliciting this information.

■ Cardiovascular Disease and Diabetes

Homeless men ages 45 to 64 years are 40% to 50% more likely to die from heart disease than men of the same age in the general population. Although risk factors such as hypertension, high cholesterol, and diabetes have not been found to be more prevalent in the homeless population, when they are found, they are often poorly controlled.¹⁶ The dietary intake of homeless individuals is often poor. Most meals from charitable food programs do not provide adequate nutrition.¹⁷ Many homeless individuals report not getting enough to eat, and having insufficient food may be related to higher use of acute health services.¹⁸

Physicians should seek to gain a clear understanding of their diabetic patients' access to food. To help them achieve better control of their disease, they can suggest using insulin pens, which can be kept at room temperature and may be more convenient for individuals who do not have

ready access to refrigerators. In addition, clinics can let diabetic patients store unused insulin and diabetic supplies in the clinic. Because homeless individuals are more likely than others to abuse alcohol and other drugs, which can lead to liver and kidney dysfunction, close monitoring of patients on statins and oral diabetic medications is prudent.

The prevalence of smoking among the homeless is estimated to be around 73%.¹⁹ The most effective smoking-cessation intervention for this population has yet to be identified; however, behavioral support with counseling and motivational interviewing has been effective in some patients.²⁰

■ Respiratory Diseases

Respiratory illnesses, particularly influenza and pneumonia, are a major cause of death among the homeless. Homeless individuals are at increased risk of contracting influenza, as shelters facilitate transmission. A yearly influenza vaccination is recommended. Alcoholism, drug addiction, smoking, and HIV infection make individuals more susceptible to pneumonia.²¹ Clinicians should consider vaccinating all at-risk individuals against pneumonia.

The annual rate for tuberculosis in the homeless population ranges from 6.1% to 6.7%. Compared with nonhomeless people with TB, homeless people with the disease have higher rates of substance abuse, and 34% are HIV-positive, placing them at risk for additional health problems.²² Screening for latent tuberculosis using tuberculin skin testing every year with the intention to treat is advisable. An induration equal to or greater than 10 mm is considered positive. However, because of the duration of treatment, individuals may not be able to complete isoniazid therapy. According to the CDC, screening for active disease rather than latent tuberculosis infection may be more appropriate in certain individuals. Active disease should be suspected in a homeless person with a fever and a cough lasting longer than two weeks.



■ **Infections**

The risk of blood-borne infections such as HIV and hepatitis B and C is greater among the homeless population than the general population because homeless people are more likely to engage in risky behaviors such as intravenous drug use.²¹ The rate of HIV infection in the homeless population is at least three times that in the general population. Most studies estimate substance abuse in the HIV-positive homeless population to be between 20% and 35%, complicating their health and treatment of their condition.²³

It is more difficult to determine the rate of hepatitis C infection, but estimates vary between 19% and 69%. It is clear, however, it is most prevalent among homeless people who are HIV-positive (65% to 69%).²⁴

Because they are more likely than housed people to have body lice, infections such as typhus, trench fever, and louse-borne relapsing fever are also being seen in the homeless population.²¹

All homeless individuals should be screened for HIV, hepatitis B, and hepatitis C routinely, and they should be vaccinated against hepatitis A and hepatitis B. Since homeless individuals may be exposed to vaccine-preventable diseases, clinicians should pay special attention to their overall immunization status. Minnesota's electronic immunization registry, MIIC, is an invaluable tool for clinicians who care for homeless patients.

■ **Skin Diseases**

The most common medical conditions in homeless individuals are dermatologic diseases, with scabies, pediculosis, eczematoid eruptions, and skin infections being prevalent.²¹ In addition, homeless people are often at risk of cellulitis and abscesses. Patients should have a thorough skin examination as part of their yearly physical and should be asked about new rashes and itching whenever they are seen in clinic.

■ **Dental Disease**

Homeless people are likely to have poor dentition and gross tooth decay that is re-

lated to smoking and alcohol use.²⁵ Both nationally and in Minnesota, homeless people have consistently identified dental care as an unmet health need.^{26,27} Primary care providers can identify dental caries, pulpitis, periapical abscess (a complication of pulpitis), periodontal diseases (gingivitis and periodontitis), and pericoronitis.²⁸ For that reason, clinicians should perform an oral examination at least yearly to check for these conditions. Brushing with fluoridated toothpaste twice a day after meals is recommended. Clinics can offer free toothbrushes and toothpaste for patients who need them. Gingivitis can be treated using chlorhexidine gluconate mouth rinse, and periapical abscesses that have extended in deeper tissues should be treated before a patient is referred to a dentist.

■ **Foot Conditions**

Foot problems are common among homeless people. However, many do not seek care because of the poor condition of their shoes and socks and foot odor.²⁹ Tinea pedis, which is common, may predispose those with diabetes to bacterial skin infections.³⁰ Common noninfectious conditions include nail pathologies, corns and calluses, neuropathy, hallux valgus, pes planus, and plantar fasciitis.³¹ These conditions can cause pain when walking, which is often the primary mode of transportation for homeless individuals. In addition, a significant number wear shoes that do not fit properly.³² Exposure to the elements can result in frostbite and immersion foot. Although the treatment of both is often rudimentary, it does require shelter, clean footwear, and close monitoring. Both conditions, particularly frostbite, can be limb-threatening.^{33,34} Foot examinations should be done at least yearly. Having clean socks available for patients can mitigate the effects of immersion foot. During visits, patients can be given the opportunity to soak their feet to soften corns and calluses. Physicians should be prepared to manage nail conditions such as onychocryptosis and have toenail clippers available for patients whose nails need trimming.

■ **Chronic Pain**

Homeless individuals often experience significant chronic pain. Physicians may be reluctant to prescribe narcotics because of a patient's history of substance abuse, psychiatric co-morbidities, high no-show rates, and inability to take medication as prescribed.³⁵ Clinicians should take a history that includes details about prior treatments for pain, exploring how pain affects the patient, and eliciting the patient's expectations about pain management. The history should also cover mental illness, substance abuse, and traumatic injury, and patients should be informed as to why this is important. The physical examination should focus on identifying trauma and signs of addiction. A thorough evaluation for the etiology of the pain should be made if it is not already known.

Management of pain should involve both pharmacologic and nonpharmacologic modalities (eg, physical therapy). Nonopioid medications generally should be used first. Narcotics should be considered for patients who have severe pain, impaired physical function, poor quality of life, and when there are contraindications to other medications. Concern for loss, abuse, and diversion of medication should be discussed openly. Pain management agreements should be implemented so patients understand provider expectations and clinic policies concerning narcotic prescribing. Universal use of urine toxicology screens and pill counting in patients using opiate therapy can help identify abuse and diversion.³⁶

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Disability

The cumulative result of these physical and psychiatric conditions is often disability, which is a barrier to employment and perpetuates homelessness. In the national HUD survey, close to 37% of the estimated 1.59 million homeless individuals had a disability compared with 15.3% of the general population in the same year.¹ In Minnesota, 41% of homeless adults reported having a disability that limited the kind of or amount of work they could do.³ Nationally, only 10% to 15% of homeless people receive Supplemental Security

Income (SSI) or Social Security Disability Insurance (SSDI).¹ Studies exploring the impact of service-connected disability benefits in homeless veterans have found that veterans benefits can reduce the risk of being homeless.^{37,38} Health care providers can play a crucial role in helping homeless persons obtain insurance by documenting disability status on applications for emergency medical assistance, SSI, and SSDI. Unfortunately, many individuals who qualify for Social Security benefits do not get them because of insufficient medical evidence. The National Health Care for the Homeless Council recommends that clinicians send a letter of support summarizing the patient's disability status and, when appropriate, medical records to the local Social Security administrator managing the case.³⁹ Whenever possible, this letter should include the perspectives of social workers, case managers, and street outreach workers, who often know a patient's functional limitations better than the treating physician.

Reducing Barriers to Care

Another step toward improving the health of homeless patients is to make the health care system more welcoming and easier to navigate. Many homeless individuals feel unwelcome in clinics and medical offices.⁴⁰ They are often triaged according to their ability to pay and spoken down to. They may be asked to leave or mistreated in other ways.⁴¹ Clinics can better serve the needs of homeless individuals by educating staff about homelessness and assigning each homeless patient an advocate to help them navigate the health care system and identify their unmet needs. Clinics that serve a large number of homeless patients might include homeless or formerly homeless individuals on an advisory board in order to identify specific ways to make homeless patients feel more welcome.

Clinics can supply bus or subway tokens and allow unscheduled visits to better accommodate the scheduling and logistical challenges that homeless individuals face.⁴²

The need for food, shelter, and employment often trumps other needs in-

cluding medical care.⁴³ Health care providers play an important role in helping homeless individuals meet these needs. Physicians frequently are the gateway to obtaining cash assistance, job training, and vouchers for housing. In order to get these things, patients are required to have a physician document a medical condition that impairs their ability to work and necessitates priority housing. Research shows that having adequate housing can decrease substance abuse, improve clinical outcomes, and decrease mortality in homeless individuals including those with mental illness and chronic conditions such as HIV.^{14,44} Physicians should recognize that completing the necessary forms ultimately can improve a patient's health.

One of the challenges for physicians is that homeless individuals frequently are unable to comply with medical instructions such as taking medication as prescribed.⁴⁵ Their nomadic lifestyle, lack of a safe place to store medications, and lack of access to refrigerators to store perishable medications such as insulin are all impediments to successful adherence. Most homeless individuals have to leave shelters during the day. Even though they may have a safe storage area such as a locker, they may not be able to access their medications at all times.⁴⁶ Managing conditions that require multiple medications and frequent dosing can be difficult.

Lack of health insurance is a barrier to health care for all people. Research has shown that when homeless individuals have health insurance, they are more likely to seek nonurgent medical care, have a regular place of care that is not the emergency department, and receive inpatient treatment for addiction and mental illness.⁴⁵ Physicians play a crucial role in helping patients obtain health insurance. For example, patients who secure SSDI benefits may be eligible for Medicare or Medicaid. Additionally, homeless individuals who are undocumented can receive emergency medical assistance if a physician documents that the individual has a medical emergency. When prescribing medications, clinicians should be aware of which ones are on the patient's health in-

surance plan formulary. Prescriptions for medications that are not on the formulary are less likely to be filled.

Homeless people also face unique challenges when they are discharged from the hospital. In many cases, they may require wound care, bed rest, ongoing antibiotic therapy, and follow-up appointments. It is often difficult for homeless individuals to carry out their treatment plan if they are discharged to shelters or to the street. As a result, homeless patients tend to stay in the hospital longer.⁴⁷ Medical respite programs offer improved care for homeless patients who have been hospitalized. These programs, which offer medical care, social services, and transportation assistance, have been shown to reduce readmission rates.⁴⁸ In the Twin Cities, Healthcare for the Homeless and West Side Community Health Services have provided respite services for a number of years. However, with homelessness on the rise, demand is increasing. The Catholic Charities Transitional Recuperative Care Program, which is a collaboration between Catholic Charities, North Memorial Medical Center, and Medica, recently opened in Minneapolis.

Conclusion

Homeless individuals will benefit most from a patient-centered medical home in which their medical and other needs are addressed and their care is coordinated. Unfortunately, not even clinics that qualify for medical home payments have the resources to deal with all the needs of a homeless person, particularly when it comes to housing and chemical dependency treatment. It is important that physicians and staff from medical clinics and hospitals, and staff from social service agencies and chemical dependency treatment centers collaborate in order to address the medical and nonmedical needs of homeless individuals.

Although those working to end homelessness have long appreciated how important it is to help homeless people gain access to medical care, the medical community as a whole has not always appreciated the importance of helping

homeless patients find housing. The evidence shows, however, that housing is a critical determinant of health. Thus, to provide the best care for their homeless patients, physicians need to be concerned with the housing status of patients as well as their health status. **MM**

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Impact of the Recession on Minnesota's Health Care Market

By Stefan Gildemeister, M.A., Erika Martin, M.P.P., and Anne Krohmer

Historically, health care spending has not been very sensitive to short-term economic disruptions. However, data show some notable changes in health care spending and utilization since the recession of 2007-2008 both nationally and in Minnesota. This article presents trends emerging from that data and discusses potential reasons for them. It also highlights other factors such as structural changes in health care delivery that were occurring before, during, and after the economic downturn, that might account for the trends.

Economists think of the demand for health care products and services as being influenced by a number of factors beyond health status including economics, demographics, and culture.¹ And while economics are likely responsible for near-term fluctuations in demand more so than demographics and culture, health care consumption is considered to be largely dependent on a household's permanent income rather than temporary increases or decreases in income. Given this, one would expect economic recessions to have a marginal impact on health care consumption. Strengthening this assumption are the following factors:

- Individuals who carry health insurance are somewhat removed from the full cost of health care. This reduces their incentive to change their consumption patterns.
- Health care is seen as a necessity and is price-inelastic, meaning that demand for it is less variable than demand for other goods and services.
- Patients consume health care based on physicians' and others' instructions, which are unlikely to change in a recession.
- Although patients are beginning to have more access to information to inform their health care decisions, lack of actionable information on

the value of health services is still a barrier to patient-driven changes in health care consumption.

Consistent with these factors, health care spending has not been very sensitive to short-term economic disruptions in the past, and although there typically is a decline in spending growth during a recession, that effect generally lags by some period.² In three out of the four previous recessions, real per capita spending growth accelerated through the downturn and was followed by a delayed decline in the growth of spending. During the 1990-1992 recession, the decline in real per-person spending growth followed an ongoing long-term downward trend. Only the most recent recession produced negative real growth.³

The 2007-2008 recession was different from the 1980-1983, 1990-1992, and 2001 downturns. For one thing, job loss was more pronounced in the most recent recession, and it was often paired with a loss of health insurance coverage. Household income fell to record lows, improving only slightly in 2010, and improvements in the job market have been slow in coming since the recession officially ended in 2009.⁴

In Minnesota, the unemployment rate began to rise in 2007 from a low of 5% and reached a high of 8.1% in 2009, following the national trend in unem-

ployment. Perhaps because Minnesota's unemployment rate was never as high as the national rate and because the state's economy does not rely as heavily on construction and other industries that were hit hardest during the downturn, the recovery here has been somewhat faster than in the nation as a whole. Still, Minnesota's economy lost 128,000 jobs between 2008 and 2010, with the majority of losses occurring in 2009.⁵

Largely as a result of those job losses, and potentially losses in income, Minnesota experienced the largest decline in the number of people with private health insurance coverage in a decade, with the number of people covered falling by nearly 140,000, or about 4%, between 2007 and 2009.⁶ When all was said and done, in 2009 fewer people were working for an employer who offered coverage, fewer were eligible for coverage through their employer, and fewer elected to enroll in the coverage that was offered to them.

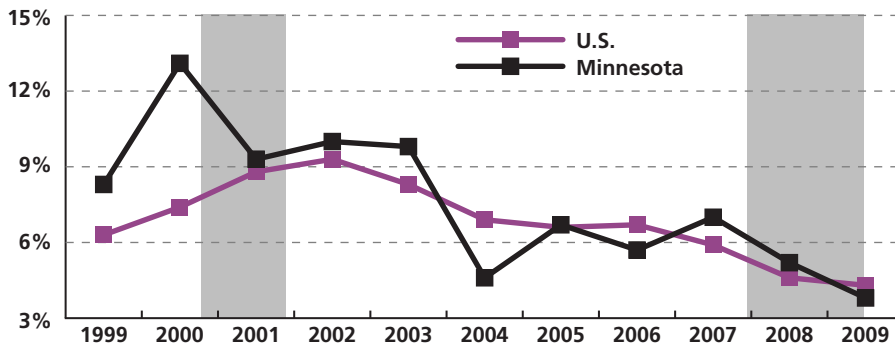
And while the decline in private health insurance coverage was partially offset by higher enrollment in public health insurance programs during that period, the share of the population without health insurance grew to 9%, the largest percentage recorded since the state began measuring uninsurance rates.⁶ Income also fell in Minnesota during that period. Average weekly wages dropped by about 1%, and personal income shrank by 2.5% in 2009.^{7,8} As noted, this likely contributed to the loss in coverage.

The Effect on Health Care Spending

Although total health care spending in Minnesota in 2009 (the most recent year

Figure 1

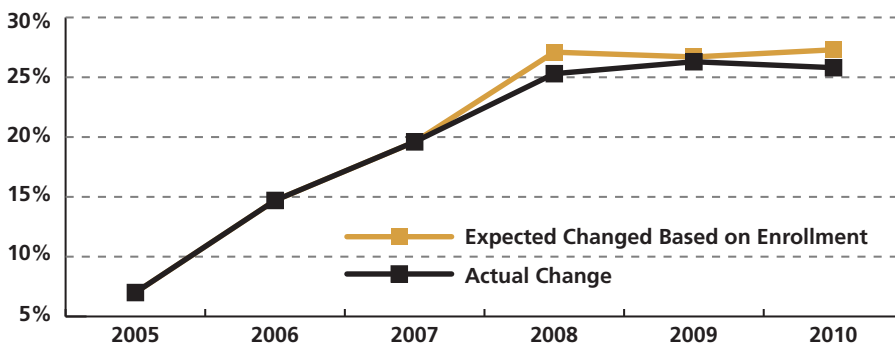
Annual Health Care Spending Growth Rates for Minnesota and the United States



Source: Health Economics Program analysis of Minnesota data and data from the Centers for Medicare and Medicaid Services

Figure 2

Cumulative Change in Minnesota Private Health Spending



Source: Health Economics Program analysis, unpublished

for which information is available) rose to the highest absolute volume of spending over time (\$36.4 billion) and accounted for the largest share of the economy ever (14.1%), spending growth was at its lowest level since 1997 (3.8%).⁹ In fact, the rates of health care spending growth in Minnesota for 2008 and 2009 were at historic lows, a trend that was mirrored nationally (Figure 1).⁹

The modest year-over-year growth in total health care spending in 2008 and 2009 (5.2% in the U.S. and 3.8% in Minnesota, respectively) was driven in large part by slowed growth in private spending, ie, spending on behalf of people who obtain coverage through an employer or through the individual insurance market. Private spending accounted for approximately 56% of total health care spending in 2009. Before the recession, private

health care spending grew 8%, on average, annually. In 2008, private spending growth slowed to 3.7%, and in 2009 it decelerated to 1.4%.⁹ Preliminary data for 2010 indicate a further decline in private spending growth and possibly a net contraction. During the same time period, public spending on health care rose 7.4%, somewhat offsetting the slower growth in private spending and contributing to the increase in overall spending growth.⁹ Although continuation of private health insurance coverage was available through COBRA for some people who lost their jobs, and federal subsidies were available to help offset the cost of that coverage, the reach of COBRA was apparently limited.¹⁰ Data from the Minnesota Department of Human Services show a rapid increase in the number of people seeking coverage through Minnesota's public health insur-

ance programs during the recession years.¹¹

The fact that fewer people had private insurance does not alone explain the decline in private health care spending, however. As shown in Figure 2, after accounting for the decline in enrollment, private spending was expected to have grown by about 27.3% between 2004 and 2010; but actual growth fell short of that by 1.5 percentage points, or about \$70 million. This suggests that even those who retained their private coverage (or gained it during this period) reduced their use of health care services slightly, either by using fewer services or substituting lower cost services for higher cost ones.

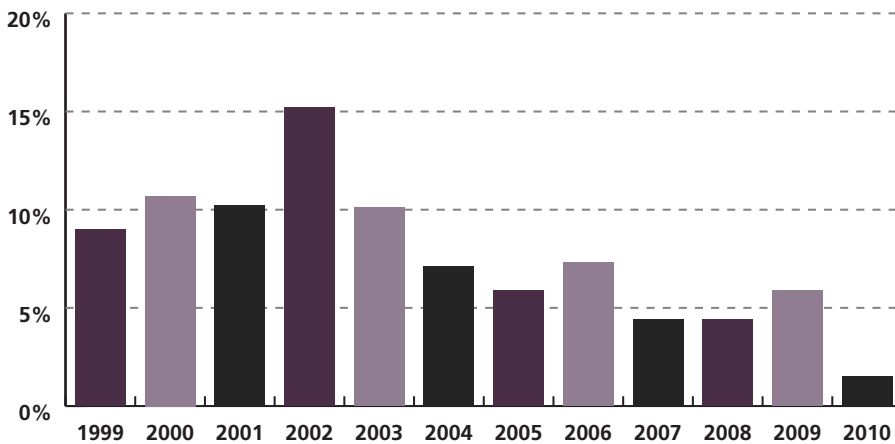
This point is reinforced when we limit our analysis to health care costs for people enrolled in private health plans in Minnesota. After moderate growth in the underlying cost of health care in 2008 and 2009, health care cost growth dropped to 1.5% in 2010, the lowest rate of growth since the Department of Health began conducting this analysis in 1995 (Figure 3).¹² This drop in year-over-year cost growth indicates changes in patterns of utilization (use and intensity) among people with private coverage, with the largest moderation occurring in 2010. What is unclear is the extent to which this moderation in utilization for the privately insured is the result of individuals delaying or foregoing care because of loss of income and economic uncertainty, or because of structural changes in benefit design that place a greater financial burden on individuals through greater cost sharing.

Changes in Utilization

Data that can help illustrate changes in health care utilization during the recession are somewhat limited. One national study found that the recession led to a reported reduction in the use of routine medical care for more than a quarter of Americans.¹³ Another survey found that an increasing share of households reported having delayed or canceled health care visits in early 2009 compared with three years earlier.¹⁴ Physician visits, imaging studies, and nonelective procedures were the services most often deferred. This is consis-

Figure 3

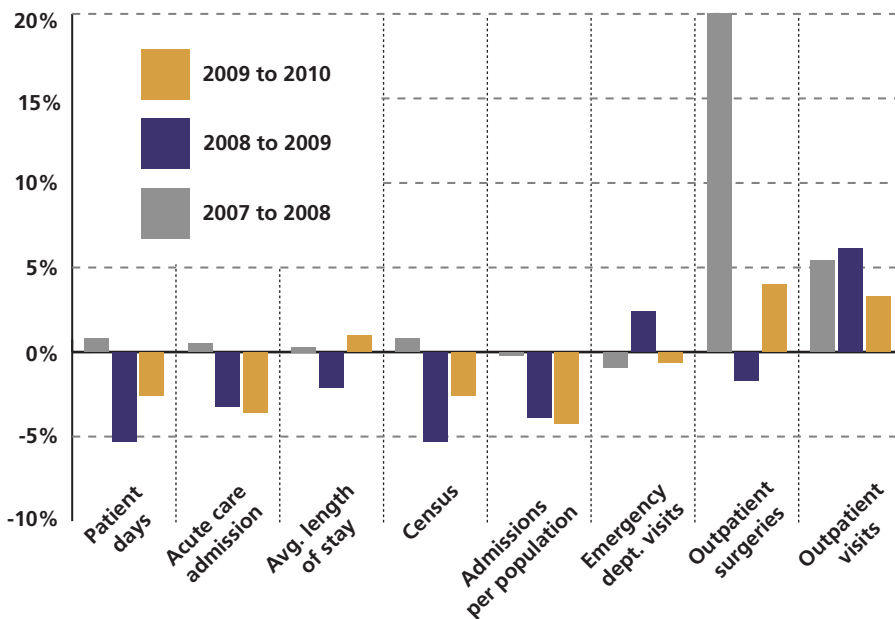
Percent Change in Per Member Health Care Costs for Privately Insured



Source: Health Economics Program analysis of annual health plan data

Figure 4

Trends at Minnesota Community Hospitals, 2007–2010
Percent Change From Previous Year



Source: Health Economics Program analysis of annual hospital reports

tent with findings cited in a paper by the Kaiser Family Foundation, which show a 17% decline in physician visits between the second quarter of 2009 and the second quarter of 2011.¹⁵

One would expect utilization trends to be somewhat similar in Minnesota. Unfortunately, very little data are available with which to test this empirically or, more importantly, study the effect of changes in utilization on health.

Most of the data we have on utiliza-

tion trends come from hospitals, which account for about 33% of all health care spending. As shown in Figure 4, cumulative growth in admissions at Minnesota hospitals slowed in 2008 and was negative in fiscal years 2009 and 2010; the number of patient days also fell during this period.¹⁶ Absent external factors, this decline may appear surprising because inpatient care is thought of as care that typically cannot be delayed or avoided and has grown steadily year over year. Also, the decline took place

while Minnesota's population continued to grow at an average annual rate of 0.6%, resulting in the largest decline in admissions per population ever recorded.¹⁶

The average length of stay increased slightly in 2010, after holding steady for many years and declining by 2% in 2009. This might indicate that the complexity of cases admitted to hospitals is increasing and that the trend of substituting outpatient care for inpatient care is slowing (the number of outpatient visits continued to grow between 2008 and 2010, albeit at a lower rate than in previous years). Hospital outpatient visits grew modestly between 2007 and 2010.

The trend for births in Minnesota also shows a sizable change during the recession years. From its high of 73,162 in 2007, the number of births has dropped each year since (by 1.8%, 2.4%, and 3.1%, respectively) to a low of 67,733 births in 2010.¹⁷ Because nearly all deliveries occur in hospitals, this is also a measure of a change in hospital utilization.

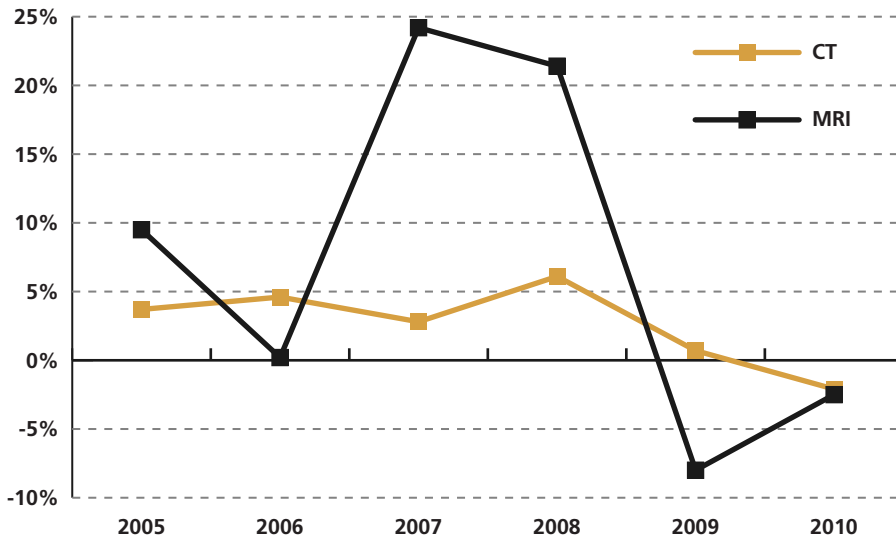
The trend for utilization of all types of imaging services mirrors that for inpatient utilization in 2009 and 2010. The number of MRI scans performed fell cumulatively by 10% between 2008 and 2010; growth in CT scans was nearly flat in 2009 and fell 2 percentage points in 2010 (Figure 5). Again, multiple factors likely contributed to this trend, including recession-related access and affordability concerns. In addition, changes in the processes for ordering these high-cost tests and health plans' requiring preauthorization for imaging services likely played a role as well.

Spending Outlook

It is clear that patterns of health care utilization in Minnesota and the United States changed from 2007 to 2010. What is not clear, however, is to what extent the recession was responsible for those changes. The answer to this question, which would require analysis of trends following a recovery, would help us understand whether the recession had a one-time impact on health care consumption or if it exacerbated trends that were already taking place such as the slow-but-steady decline in em-

Figure 5

Trends in Utilization of Select Imaging Procedures in Minnesota



Source: Health Economics Program analysis of annual data from imaging facilities

ployer-sponsored insurance coverage (ESI) that is the result of structural changes in the labor market and increasing concern over the affordability and value of ESI coverage.¹⁸ Given this uncertainty, it is difficult to anticipate whether a more mature recovery will unleash pent-up demand for care, resulting in steep growth in health spending, or whether health care consumption and cost trends will continue to remain moderate in the years to come.

What appears to be certain is that the health care system is evolving and that a number of factors will affect how much we collectively spend on health care in the future, which services we obtain, and from whom we obtain them. Key among these factors is the implementation of the Affordable Care Act (ACA). Despite the backdrop of an uncertain political, legal and economic environment, the ACA will likely affect access to health insurance and the affordability of health care in powerful ways including through the development of health insurance exchanges, standards for minimum benefits offered by health plans, subsidies to help offset the cost of coverage and care, and regulation of health insurance rate increases.

The ACA also aims to change the payment system so that providers are paid according to the value rather than volume of the care they deliver and to create greater

transparency regarding the cost and quality of care to help individuals be more informed purchasers of care. For a number of years, and especially since the passage of the 2008 Minnesota health reform law, Minnesota has been engaged in addressing these issues through initiatives such as the Provider Peer Grouping program and the Statewide Quality Measurement System. These efforts, together with investments we are making in primary care, chronic disease management, and public health, will continue to change health care and affect utilization and spending. And patients as active consumers or consumers as informed patients will play a key role in reforming the way care is delivered and paid for.

Researchers and policy analysts will need to provide thoughtful, empirical work and meaningful evaluation, particularly with regard to structural changes in health care—both affecting the source of coverage as well as benefit design—that could affect health outcomes. To do so, we need to ensure that better and more timely data are in place so that we can contribute to this transformative work. **MM**

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2011 American College of Physicians Poster Competition Winners

■ Each year, the state chapters of the American College of Physicians invite medical students and residents to take part in a scientific poster competition. Last year, residents and students submitted more than 165 posters for consideration at the Minnesota chapter's annual meeting in Minneapolis on November 4, 2011. Each of the internal medicine training programs (Abbott Northwestern Hospital, Hennepin County Medical Center, Mayo Clinic, and the University of Minnesota) was well-represented with submissions in the clinical vignette, research, and quality improvement categories.

Posters were judged by practicing internists and internists from the state's academic medical centers. Peer judging was done during a "Poster Rounds" session. Criteria used by judges included clinical relevance, originality, and written and visual presentation. A "People's Choice" award was also selected by popular vote.

The Minnesota chapter will sponsor the winners in presenting their posters at the American College of Physicians' annual meeting in New Orleans in April. Congratulations to all on their excellent work. For information about the 2012 competition, contact Minnesota.ACP@gmail.com

■ Clinical Vignette Winner

Severe Encephalopathy and Impending Cerebral Herniation in Acetaminophen Toxicity: Recovery with a Novel Hypernatremic/Hypothermic Protocol

By Jessie Roske, M.D., and William Browne, M.D., University of Minnesota

The challenge of managing acetaminophen-induced fulminant liver failure in patients deemed not to be transplant candidates is encountered all too often at transplant centers. The most feared complications are cerebral edema and herniation. A 37-year-old female with a past medical history significant for alcohol dependence presented with encephalopathy, coagulopathy, and hyperbilirubinemia and was found to have a toxic acetaminophen level 48 hours after ingestion. Given refractory alcoholism with multiple failed attempts at substance abuse treatment, the patient was not considered a candidate for liver transplantation. The patient's neurologic status deteriorated with evidence of impending central herniation including extensor posturing, sustained clonus, and bilateral Babinski sign. In an effort to avoid catastrophic neurologic sequelae, hypernatremia to 165 mmol/L and hypothermia to 32° C were urgently induced. Additional complications during the ICU stay included acute anuric renal failure requiring renal replacement therapy and further derangement in liver function tests with undetectably elevated INR. Given the markedly elevated INR, placement of an ICP monitor was felt to be contraindicated.

Continuous renal replacement therapy was utilized for maintenance of hypernatremia. Ultimately, in the absence of direct ICP measurement, the patient was cooled for a total of six days, with timing of rewarming based on improving neurologic exam, corresponding improvement in liver function, and serial head CT scans. The patient was subsequently extubated and discharged from the hospital on Day 32 with complete neurologic recovery and improving hepatic function. In this very challenging case, the efforts of a multidisciplinary team to use clinical experience and the limited published literature to develop a novel induced hypernatremia/hypothermia protocol produced an extremely satisfactory outcome.

■ Research Winner

Two Cases of Isolated Ventricular Metastases from Renal Cell Carcinoma

By Ben Zhang, M.D., and Roxana Dronca, M.D., Mayo Clinic

Cardiac metastasis from renal cell carcinoma is very rare, with few previously reported cases. In this series, we report two cases of ventricular metastases from renal cell carcinoma without vena cava or right atrial involvement. The first case involved an initially isolated inoperable metastasis to the left ventricle, which was treated with systemic targeted therapy with favorable local response. The second case involved a patient with isolated metastasis in the interventricular septum with extension into the right ventricle, which has also remained

stable in size on systemic targeted therapy. This patient later developed tachyarrhythmia as a consequence of the tumor mass, for which he subsequently underwent electrical cardioversion and pacemaker placement. We describe our management of these cases and discuss the current medical and surgical approaches to the treatment of cardiac metastases from renal cell carcinoma. In conclusion, we propose that targeted systemic therapy with tyrosine kinase inhibitors maybe a viable therapeutic alternative to metastasectomy for patients with inoperable cardiac metastatic disease.

■ Quality Improvement Winner

.....
Steroid Use in COPD Exacerbation: A Quality Improvement Project at Regions Hospital, St. Paul, Minnesota

By Kristina Krohn, M.D., Benji Mathews, M.D., Gregory Poduska, M.D., Lauren Haveman, M.D., Emily Schafhauser, M.D., Brian Harahan, M.D., Ph.D., Brian Hanson, M.D., Sheila Nguyen, M.D., Hope Pogemiller, M.D., M.P.H., Saba Beg, M.D., Elizabeth Hofbauer, M.D., and Paula Skarda, M.D., University of Minnesota

Chronic obstructive pulmonary disease (COPD) is a leading cause of hospitalizations and mortality in the United States. Exacerbations of COPD are best treated with corticosteroids and by addressing the underlying cause of decompensation. In practice, the dose and route of steroid administration in COPD exacerbations varies widely.

METHODS: We performed a literature review to identify the effectiveness of various steroid doses and administration routes used in the treatment of COPD exacerbations. We then examined the current steroid administration practices used for all patients admitted to Regions Hospital in St. Paul, Minnesota, with a primary diagnosis of COPD exacerbation between January 2010 and December 2010.

RESULTS: A review of the literature identified five key studies of steroid use in COPD exacerbations. The earliest of these studies demonstrated the benefits of using methylprednisolone 125 mg IV vs. placebo. Side effects related to this dose included hyperglycemia and upper GI bleeding. Subsequent studies have compared lower oral doses (20 to 80 mg prednisone equivalent) to high IV doses and found low-dose oral steroids to be equally effective with fewer side effects. Among patients admitted for COPD exacerbation (n=225), 39% received low-dose (20 to 80 mg prednisone equivalent) oral prednisone in the emergency department. Twenty-two percent received higher doses or IV doses in the emergency department. The initial inpatient steroid dose of these same patients revealed that 66% received a low dose compared with 33% who received high-dose or IV steroids. There was no correlation ($P<0.05$) between either dose or route of administration and recent COPD exacerbation, outpatient steroid use, or NPO status.

CONCLUSION: Many physicians continue to prescribe unnecessarily high or IV doses of steroids for COPD exacerbations

despite evidence suggesting that lower doses are equally effective and have fewer side effects. To improve the quality of care provided to patients admitted with COPD exacerbations, we are creating a COPD order set that includes information about the effectiveness of lower-dose oral steroids and encourages selection of lower doses for the initial treatment of these patients. This order set will include a decision support tool to assist physicians in determining which patients may be appropriate for higher doses. A secondary analysis will be carried out one year after implementation to determine if the provider education and decision support tool are helpful in increasing the number of providers using lower-dose oral steroids for COPD exacerbations.

■ Medical Student Winner

.....
Exploring HLA Genetics and Gluten Sensitivity in Patients on a Self-treated Gluten Free Diet

By John A. Coburn, Jennifer L. Vande Voort, M.D., Brian D. Lahr, M.S., Carol T. Van Dyke, Cynthia M. Kroning, M.L.T., Tsung-Teh Wu, M.D., Ph.D., Manish J. Gandhi, M.D., Joseph A. Murray, M.D., Mayo Medical School

Increasingly, patients start a gluten-free diet (GFD) without a clear diagnosis of celiac disease (CD). HLA typing is useful in ruling out CD in patients with equivocal small bowel biopsy (SBB) or serology, but its utility and the clinical features of patients on self-treated GFD are largely unknown.

METHODS: A retrospective single-center cohort study was conducted comparing 137 patients who had no clear evidence of CD on a self-treated GFD with 443 patients who had biopsy-proven CD. All patients had class 2 HLA typing performed. Small bowel biopsy was performed on 100% of the CD and most (80%) of the self-treated patients. We compared HLA type, symptoms, serology, SBB result, and response to a GFD for both the self-treated and CD patients. Results were analyzed using univariate logistic regression modeling, adjusted for age and gender.

RESULTS: The self-treated patients presented more often with diarrhea ($P<.001$), abdominal distention ($P<.001$), flatulence ($P=0.002$), abdominal cramping ($P=.019$), itchy skin ($P=0.015$), inflamed mouth ($P=0.038$), or constipation ($P=0.011$) and less often with anemia ($P<.001$) or malaise ($P=0.016$) than the patients who had a CD diagnosis. Forty-one percent of the self-treated patients lacked DQ2.5 and DQ8 compared with 6% of the CD patients ($P<.001$). Two percent of the self-treated patients had SBB consistent with CD, 19% had intraepithelial lymphocytosis. There was no difference in family history of CD between groups ($P=.77$). Patients with CD were only slightly more likely to benefit from a GFD than self-treated patients (98% versus 94%, $P=.026$). There was no difference in positive response to a GFD in self-treated patients who carried DQ2 and/or DQ8 versus those who did not ($P=.343$).

CONCLUSION: HLA typing is useful in working up self-treated patients on GFD. Although confirming CD is rare, most self-treated patients report benefits from GFD, regardless of their

DQ2/DQ8 status. Therefore, gluten sensitivity may play a role in a portion of these patients.

■ People's Choice Winner

Progressive Multifocal Leukoencephalopathy Masquerading as Neurosarcoidosis in a 52-Year-Old Male

By Mathew Lieser, M.D., and Lisa Callies, M.D., Abbott Northwestern Hospital

Progressive multifocal leukoencephalopathy (PML) is a rare CNS demyelinating disease that is caused by the John Cunningham (JC) virus. This disease occurs almost exclusively in patients with impaired immune systems.

CASE PRESENTATION: A 52-year-old male, PMH significant for sarcoidosis (on steroids and methotrexate until one year prior to admission), was admitted for rash, weight loss, dizziness and left-side weakness. Head MRI revealed an extensive zone of confluent signal abnormality within the white matter of the right superior medial frontal and parietal lobe. An LP was performed and results were normal. A skin biopsy was performed and pathology was consistent with active sarcoidosis. A serum ACE level returned at 199 include mcg/L label (normal 8 to 53). Numerous consultants felt the clinical picture was consistent with neu-

rosarcoidosis. The patient was started on high-dose steroids and methotrexate with some improvement in symptoms. However, the patient presented six weeks later with left-side hemiplegia and altered mental status. Head MRI revealed worsening infiltrative process that crossed the midline. The patient underwent a brain biopsy that was consistent with PML, including strongly positive *in situ* hybridization for JC virus. HIV serology was negative. Methotrexate was stopped and steroids were tapered. The patient was treated with Remeron (a serotonin reuptake inhibitor) and mefloquine 250 mg for three days, then weekly (per recent NHI study). Unfortunately, the patient had no improvement in symptoms and was discharged to a long-term care facility, where he passed away.

DISCUSSION: Progressive multifocal leukoencephalopathy is a rare and almost universally fatal disease. It occurs in approximately 5% of patients with AIDS and has a three-month mortality rate of 20% to 50%, so prompt intervention is essential. It is caused by the JC virus, which induces demyelination of the CNS by affecting the myelin-producing oligodendrocytes. In patients who are not HIV-positive, the average survival is three months. In patients with HIV, survival has improved with HAART therapy. There is no proven treatment for PML other than stopping medications that create an immunocompromised status. This case was not only interesting but also a good reminder to be open to revisiting a differential diagnosis to explain a patient's symptoms. **MM**



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Metropolitan By Anjali Wilcox *Medicine*

Alarm sounds.

“... expect snowfall throughout the day. This is
Minnesota Public Radio ...”

Lub-dub, lub-dub.

Morning? Already.

The smell of coffee entices me.

The morning air is cold and crisp;

I pull my jacket sleeves down to cover my gloveless
hands.

The halls of the hospital are empty. The ambulance
sirens are silenced.

Even the Hospital sleeps.

Lub-dub, lub-dub, heartbeats are regular, Lub-dub.

Patients are recovering.

It is calm.

The pace quickens.

Too many patients. Too many problems. Too little time.

Observing my patient in the exam room.

She is pregnant. No health insurance and living in a
shelter.

Is she the same age as I am?

Lub-dub, lub-dub.

Alcoholism, domestic abuse, obesity, a suicide attempt.

Why has she allowed her life to unfold this way?

Lub-dub, lub-dub.

She tells her story. I begin to listen.

To empathize rather than criticize

Lub-dub, lub-dub.

The barrier falls.

Her trials and tribulations make mine insignificant.

Why am I here and she's there?

I admire her courage and strength.

Lub-dub, lub-dub.

Swift keystrokes click as SOAP notes are completed.

Exam rooms slowly empty.

Heading home now, exhaustion sets in.

Lub-dub, lub-dub.

Where will she sleep tonight?

Will her boyfriend hit her again?

Will her baby survive?

I drift off to sleep.

Lub-dub, lub-dub.

Anjali Wilcox is a student at the University of Minnesota Medical School. This poem was first published in *Becoming a Doctor: Reflections by Minnesota Medical Students*, edited by Therese Zink, M.D., M.P.H., and published with support from the Minnesota Medical Association Foundation. It is reprinted with permission.