Cover Story » *Cinda Becker*

PROFITABLE COMPLICATIONS

One analysis says that in some cases infections can actually help a hospital boost its bottom line, but naysayers disagree

Wiping out infections from hospitals may not be the financial slam-dunk it's cracked up to be, which might explain a lot of the inertia surrounding infection control.

Karen Wolk Feinstein, president and chief executive officer of the Jewish Healthcare Foundation and the Pittsburgh Regional Health Initiative, had wondered about the problem after spending the better part of the past decade focused on eliminating hospital infections. She found that when hospital staffs put their collective minds to it with a carefully wrought-out, step-by-step, but ultimately simple plan, most institutions could successfully wipe out infections with "phenomenal" results. The clinicians leading the charge reported that reducing hospital infections not only obviously improved outcomes, but also slashed costs—a corollary to the deep-rooted belief that higher quality fattens hospital profit margins.

But the compelling arguments for eliminating hospital infections have been anything but infectious among hospital policymakers, puzzling Feinstein and causing her to wonder: Was the healthcare payment system perhaps actually dissuading them?

"If some very smart people are saying you are going to save lots of money (by eliminating infections) wouldn't somebody have halted the activity?" she asked. "Frankly, we didn't observe that happening. It's not that they were not attacking it, but it was not the kind of assault we would expect for a large reward."

A central line is inserted into a patient at Hamot Medical Center, which has installed a system to track infections. Central lines are a common site for hospital infections.

Contradicting conventional wisdom

The Pittsburgh Regional Health Initiative hired Harold Miller, a Pittsburgh-based consultant, to drill into the numbers. What his analysis concluded runs counter to prevailing wisdom, upsetting the faithful who have been preaching both the financial and clinical power of infection control. Thanks to a dysfunctional payment system that is largely indifferent to good outcomes, hospitals that do just an OK job of infection control stand to generate more revenue and fatter profits than hospitals that do an outstanding job, he concluded. No hospital is intentionally trying to infect patients to boost revenue according to both Feinstein and Miller, but on some visceral level there may be a quiet understanding that wiping out infections entirely will not really reap the promised financial rewards.

"It's sort of a sad story. You don't want to be at the bottom of the heap because then you add a lot of new costs to the system and add a lot of new expense to the system. On the other hand, if you are just average or better than average, then with certain payers you make enormous margins," Feinstein said. "The sad thing is you

would pay a price to be at the highest end given the current payment system. ... This is not in any way to suggest most institutions are not trying to eliminate infections, but the sad reality is that we have a payment system that is not going to reward them for doing it. It won't reward the worst apple in the bin either. We have a payment system that rewards being in the middle of the pack."

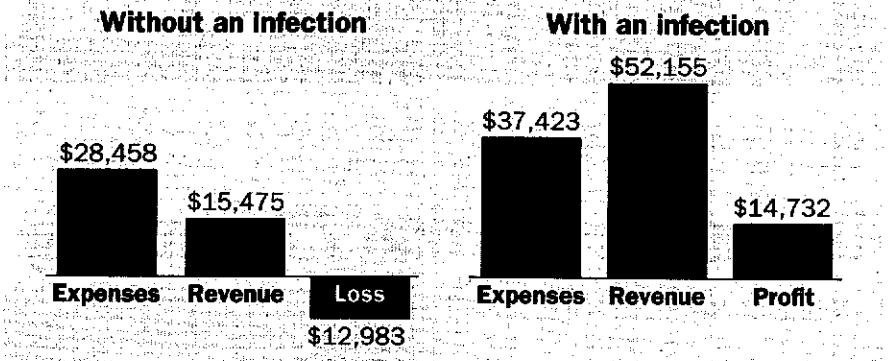
The findings arrive as the CMS stands poised, with Congress' approval, to restructure the Medicare reimbursement system, paying for results rather than volume (Dec. 3, p. 6). In a separate but related move, the CMS is also ready to embark on a shift in policy that will deny payment for hospital-acquired conditions such as infections, objects left in patients during surgery and air embolisms as hospitals nationwide voluntarily embrace a similar policy in word if not deed (Dec. 10, p. 6). As a precursor to the payment change, hospitals began reporting to the CMS on Oct. 1 secondary diagnoses present on the admission of patients, and beginning on Oct. 1, 2008, cases with eight selected conditions—three of them infections—will not be elevated to a higher-paying DRG unless they were present on admission. The CMS has said that other conditions will be included in the new nonpayment policy in the future.

The Pittsburgh Regional Health Initiative's analysis of infection economics adds to worrisome questions for hospitals as to whether the CMS is moving effectively enough to satisfy the nation's growing appetite for quality reform. Miller does not offer much comfort from that perspective: In the near term if not the long term, neither policy change will do much to right-size the financial vagaries of Medicare, according to Miller. "Pay-for-performance is a Band-Aid on a fundamentally broken system," Miller said. "A small pay-for-performance system cannot offset the very large and powerful disincentives in the underlying payment system."

The difference between Miller's analysis and others that explore the finances of treating hospital infections lies in the marginal costs. When conducting cost accounting for treating infections, most hospitals factor in the considerable "fixed" costs or overhead of running a hospital, which in the case of treating central-line infections, for example, can seemingly reach as high as 70% of all costs, according to Miller. But the reality is that the variable costs—pretty much just supplies such as drugs and disposables—account for less than 19% of the spending, and are really more indicative of the added cost of treating infections, he said. Hospital pricing is more in line with airline pricing: Once airlines sell the expected number of seats and cover all the fixed costs of doing business, all additional revenue from selling the remaining seats is essentially icing on the cake. Likewise, if reimbursement for treating patients who develop a complicating infection gets bumped up to a higher DRG or if it results in eligibility for an outlier payment, the hospital actually generates more revenue and profit to add to its bottom line. On the other hand, the negative financial impact at hospitals that are plagued with many serious infections will still be considerable as fixed and semivariable costs such as ICUs and nurses will obviously skyrocket, he added.

UPON INFECTION

In certain instances, a money-losing condition within Medicare can turn profitable if the patient becomes infected. This can be true for a patient with diverticulitis who acquires a central-line associated bacteremia



Source: Pittsburgh Regional Health Initiative analyses

System stumps many

Many chief financial officers are "surprised (to find out) how many outlier payments they are getting," Miller said. "What I found out is most people didn't understand the payment system well enough. They crossed their fingers and hoped there would be enough revenue to cover their costs for the year."

Miller said he expects the impact of Medicare's new policy regarding hospital-acquired conditions will be minimal, only affecting those cases in which an infection bumps up the DRG and causes no other complications or does not increase charges enough to justify an outlier payment—a relatively small number of cases. Indeed, in its final inpatient reimbursement rule, the CMS projected that in the first year of the new program, the financial impact of denying payment for all eight hospital-acquired conditions, including the three specified types of infections, will be $20 million.

"I think the policy statement they are making is a good one. Will it prompt hospitals to pay attention? Yes. But as a practical matter, the number of cases that would actually change payment are very small, particularly for more severe (infection) cases," Miller said.

Kathy Warye, CEO of the Association for Professionals in Infection Control and Epidemiology, agreed that there are "disincentives and weaknesses in the current payment system," but the trade group published its own briefing, *Dispelling the Myths: The True Cost of Healthcare-Associated Infections*, in February that maintained that hospital-associated infections "erode the bottom line." One of the myths the briefing sought to dispel was that "the additional cost of an HAI is largely offset by reimbursement, making the infection revenue neutral or positive." In response to that, Miller said, "I think it is a widely held belief that is not a myth."

Most hospital infection-control specialists "would love to have surveillance technology that helps identify, track and report infections," Warye said, but because the technology averages $100,000, "They didn't want to present it to management because infection prevention is considered a cost center by a lot of healthcare administrators." Most hospitals also haven't

See **COVER STORY** *on p. 16*

THE COST OF QUALITY: PART 3

This cover story on the economics of hospital infections is the third in a three-part series examining the connection between finance and patient care. Part 1, which appeared in the Dec. 3 issue (p. 6), analyzed the financial impact of Medicare's proposed pay-for-performance reimbursement system for hospitals. Part 2, which appeared in the Dec. 10 issue (p. 6) looked at the financial implications of hospitals not billing for certain adverse patient events. The complete series can be found in the "Supplements, Sections and Series" section on Modern Healthcare Online at modernhealthcare.com.

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really calculated their costs for treating infections, she added. The few studies that have been done "all indicated with the exception of a very narrow category of infections ... most are costing institutions large sums," she said. Without seeing Miller's analysis, Warye would not comment on its specifics, but "I'd rather not be part of that debate because what we should be doing is investing in preventing these infections in the first place," Warye said. "In terms of disincentives in the system, we would agree with that entirely. We would hope new payment models would emerge that will incent prevention vs. the old-fashioned notion of treating and controlling infections once they occur."

Tracking every infection

One hospital that has invested in infection prevention is Hamot Medical Center in Erie, Pa., which is working with a surveillance system to mark every infection there regardless of whether a patient came in with it not, said Stephen Danch, a senior vice president at Hamot and its chief financial officer. With the help of the tool, for the 12 months ended September 2006, the hospital isolated 776 infections among 16,209 inpatients, an infection rate of 4.7%, he said. The following 12 months, that infection rate was reduced to 3.9% "by focusing on the root causes" of the infections. Danch said the change in profitability was $6 million—a significant sum considering the 355-bed hospital's $250 million expense base. Infections also increased the length of stay an average 6.08 days—the primary driver behind the costs, he said.

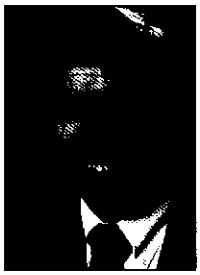
Sokola: "The more you do, the more you get paid."

Based on that experience, Danch said, "We are of the opinion that our costs will go down if we reduce infections and profit will go up." Familiar with Miller's research, he found it myopic, noting, "It's a well-accepted fact that about 5% of all patients acquire an infection and (Miller) is not looking at one in 20 patients, he's looking at one in 200 critically ill patients."

Costs aside, Danch said treating patients with infections uses up valuable resources that would be better spent on an aging patient population. "There is only so much money in the Medicare system," Danch said. Miller "is talking as if we get better at treating (infections) we will not have enough money to cover our fixed costs, but there will be plenty to treat. We have to get better as an industry."

Still, Danch admitted it would be nearly impossible to reduce the infection rate to zero, raising questions about the punitive side of Medicare's new payment policy. "We would definitely like to see incentives as opposed to outright measures that don't pay at all," Danch said. "We made progress. Is it realistic that hospitals can get to zero? ... That could be a difficult mountain to climb for some hospitals."

Miller readily agreed that hospitalwide efforts such as the one undertaken by Hamot could allow a hospital to shut down beds and send nurses home, significantly reducing costs. "It would be great if hospitals did that, but there are not many hospitals that have been pursuing eliminating hospital infections on a hospitalwide basis," he said. "Ordinarily, they pick a particular infection but they have not been pursuing it on a hospitalwide basis, at least to the level of intervention necessary to get (costs) down."



Mecklenburg says, "Aligning healthcare with volume doesn't add value."

David Young, professor emeritus of accounting at the Boston University School of Management, has similar concerns with Miller's conclusions. Like Warye, he said "very few hospitals know what their fixed and variable costs are," but Miller's analysis doesn't account for the high variable costs of hiring agency nurses or the lost opportunity, under the Medicare DRG system, of discharging a patient early to make way for another patient. (Miller argues revenue opportunities are lost only if a hospital is operating day in and day out at 100% capacity, while it would take a significant number of infection cases to change the number of nurses needed to staff.)

Nevertheless, Young also agreed about disincentives built into the payment system, particularly in regard to physicians who, with the exception of surgeons and obstetricians, are still paid by Medicare on a fee-for-service basis—unlike, of course, hospitals. "What baffles me is why Medicare hasn't moved to pay internists on a DRG basis. It seems so obvious," Young said. "I think the payment system is screwed up. I like DRGs. I think they've come a long way. ... It seems to me if I were Medicare, it would trouble me a lot that these incentives (between hospitals and doctors) are not just misaligned, but pushing hospitals in one direction and physicians in another."

Payment system reform is a painstaking process judging by the experience of two systems that independently have made small inroads in recent years. Geisinger Health System's ProvenCare initiative offers patients and payers a kind of service warranty, front-loading a financial incentive into the rate and then guaranteeing that as long as patients comply as well, Geisinger won't bill for treatment beyond that. Launched in February 2006, the guarantee so far is only offered for coronary artery bypass graft surgery, but there are four or five other "products" in development, and the Danville, Pa.-based system hopes to have 10 up and running in the not so distant future, said Tom Sokola, Geisinger's vice president of finance and CFO. "There is one rate. No matter what happens, we eat the cost," he said.

ProvenCare was undertaken because of a conviction from the highest echelon of the organization that "There is this perverse relationship in the reimbursement system in that the more you do, the more you get paid," Sokola said. Sokola, who is conducting a case-by-case review, would not share the financials but he said that in the first full year Geisinger decreased its variable costs for coronary artery bypass graft surgery by 4% and its length of stay by 8%.

Robert Mecklenburg, medical director of the Center for Health Care Solutions at 307-bed Virginia Mason Medical Center in Seattle, said he is convinced quality costs less from a societal perspective but he also acknowledged that "there are plenty of perverse incentives in the system." For example, a simple phone call from a nurse to a diabetic patient can go a long way toward improving the health of that patient, but there is no reimbursement for the call, he said. "Aligning healthcare with volume doesn't add value," he said.

Working with large employers in Seattle, Virginia Mason has redesigned treatment protocols for certain conditions with the highest costs and claims data. One of the first conditions examined was uncomplicated back pain. An analysis showed that doctors ordered a lot of unnecessary and costly MRIs, while it also revealed that ordering physical therapy for these same patients did add value to their treatment. So the prescribed treatment for these patients was revamped, saving money for their employer and adequately reimbursing the hospital.

"There are many perverse incentives along the lines of more tests and procedures and against intellectual evaluation and management," Mecklenburg said. "There is huge variability in healthcare, and the payment system aggravates a great deal of this." «

What do you think?

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