Representatives of more than 80 of the region’s corporations, health systems, insurers, government bodies and consumer and labor organizations came together on Monday, March 12 in an unprecedented show of support for U.S. Health and Human Services (HHS) Secretary Michael Leavitt’s four cornerstones for a value-driven healthcare system. The cornerstones are: measure and publish information about (1) cost and (2) quality; (3) interoperable electronic health information systems; and (4) preferences for high quality healthcare providers;

The number of endorsers present at the signing ceremony in Downtown Pittsburgh set a national record among the cities where commitments have been sought. The Pittsburgh region has produced over 80 endorsements, with more expected.

Signatories came from across competitive, political and ideological divides. They included Democratic and Republican political leaders from the City, County and State; corporate and union leaders; large, medium and small businesses; for profit and nonprofit organizations; providers, insurers and patients. All signed as a way to register their urgent concern about the need for healthcare reform as well as their belief that regional collaboration is both possible and essential to achieving greater value in health care.

**PRHI named Community Leader**

During the ceremony, HHS Regional Director Gordon R. Woodrow formally designated PRHI as a Community Leader for value-driven health care, acknowledging its decade as a force in regional collaboration to improve health care quality. PRHI is now one of eight communities so designated. Leavitt’s four cornerstones echo PRHI’s guiding philosophy that improving quality is the only sound, long-term strategy for containing costs.

“PRHI helped empower the movement for reforms at the regional level that U.S. Health and Human Services Secretary Michael Leavitt espouses and served as an inspiration for like-minded coalitions across the country,” said Woodrow.


Among endorsing organizations were the region’s three largest healthcare providers, UPMC Health System, West Penn Allegheny Health System and Heritage Valley Health System, and its three largest health insurers—Highmark Inc., UPMC Health Plan and Aetna Inc.

Stephen Halpern, chairman of the Jewish Healthcare Foundation (JHF) and President of Woodland Management, articulated the business community’s perspective on healthcare costs which rose an estimated 6.6% last year, double the rate of inflation. Escalating increases have: (1) pushed costs of employer-sponsored health benefits up by 87% in the past six years, to more than $11,000 per family, and (2) driven down the proportion of companies offering benefits to 61% from 69% in 2000, eliminating coverage for 5 million people.

The region’s display of support was consistent with the collaborative approach long espoused and fostered by PRHI, the Allegheny Conference on Community Development, the Pittsburgh Business Group on Health and SMC Business Councils, all of which helped organize the event.

Karen Wolk Feinstein, PhD, President and Chief Executive Officer of JHF and PRHI noted “I think we may look back at this day in the not too distant future and call it a tipping point.”

Dave Malone, Chairman of the Greater Pittsburgh Chamber of Commerce, said translating momentum into concerted action could serve to provide a competitive regional advantage in the recruitment of businesses and jobs.

On March 12, 2007, a national record was set when a group of Southwestern Pennsylvania’s employers signed on to the Four Cornerstones of Value-Driven Health Care.
AGH CCU celebrates one year without a CLAB

In 2003, Dr. Richard Shannon, then-Director of Medicine at Allegheny General Hospital (AGH), took the Perfecting Patient Care SM University and came away convinced that, by applying the principles and standardizing the work, the two intensive care units under his supervision could eliminate central line-associated bloodstream infections (CLAB) within 90 days.

The results of the efforts of Shannon and the care teams in the Medical Intensive Care Unit (MICU) and Coronary Care Unit (CCU) were immediate, and have been sustained for three years. Between 2003 and 2006, with more and sicker patients requiring more central lines, the MICU and CCU at AGH sustained a greater than 95% reduction in central line infections and reduced deaths to zero.

Dr. Shannon also showed that the average cost of a CLAB was about $30-50,000. As it turned out, reducing CLAB seemed to save money*. Before long, hospital leadership called for similar infection reduction in all its intensive care units.

Other benefits also accrued to the units. Because the use of femoral lines (in the thigh) declined, so did the time required to change dressings: from 15 minutes to 5. With standardized documentation and kits, staff saves time looking for information and equipment every time a line is inserted or a patient with a line is cared for.

Keys to improvement included:

• Observe the work in detail, and understand how to standardize processes.
• Collect data in real time, not waiting for quarterly, retrospective analyses.
• As soon as an infection is revealed, immediately examine how it happened; which procedures were not used or need to be changed.
• Give anyone on the care team the right to stop a procedure if known precautions are not being used.

Physician Champion steps in

As dramatic as the progress was, it was not automatically self-sustaining. Because they were keeping real-time data, the team noticed an increase in invasive procedures beginning in July, a month in which new residents arrived at this teaching hospital. Normal turnover meant new employees needed serious orientation. To keep up the progress, the culture of change had to be sustained.

In 2006, Dr. Jerome Granato, the CCU Medical Director, was awarded a grant by the Jewish Healthcare Foundation, PRHI’s parent organization, to expand upon his year-old educational program for new nurses and residents. As part of the award, he and his team attended the Perfecting Patient Care SM University, and were offered occasional assistance from an on-site PRHI coach.

“It became apparent,” said Dr. Granato, “that if you really want to suppress or eliminate CLAB, you need to sustain the culture change through education. You have to make sure the improvement pot is always simmering on the stove, and the smell is always in the air. Everybody becomes part of an organization that wants to suppress CLAB.”

Dr. Granato’s team created an extensive online teaching module for residents, to show them how to perform common procedures—wash hands, prepare a site, insert a central line, recognize a CLAB—the AGH way. They also view a video presentation depicting these techniques. After passing a multiple choice test, they demonstrate to an instructor their newly acquired skills in a 30-minute practical session with a mannequin. This program, which has been well received, has been exported to several hospitals in the United States and Canada.

The payoff for teaching central line insertion and care is huge, insists Dr. Granato. “Here is a very common procedure, I call it the caboose of invasive procedures, because it’s done by the youngest residents, with no formal training with the least degree of attending supervision. So even small degrees of training can result in big improvements, and this is certainly a case in point.”

Nursing new-hires also receive similar information through an online module and quiz. Both modules, for doctor and nurse, have been adopted successfully, hospital-wide.

“It’s more than just the education,” says Dr. Granato. “This knowledge has empowered the nursing staff and created the nursing culture where

*New reimbursement data may clarify or dispute this finding. See update on statewide infection-reduction


they see themselves as the enforcers of this policy. Doctors travel from unit to unit: the nurses come to work in that unit every day, month and year. Suddenly, we have nurses with the confidence and the authority to stop a procedure. It never used to happen, but now I might hear a nurse say, ‘You know, Doctor, you’re not adhering to policy. Please stop.’ Or ‘Doctor, this line has been in for two days. Can we take it out?’ That is revolutionary shift, and it’s taken three years to create a self-sustaining environment for it.”

Results: One year, no CLAB

Between February 2006 and February 2007, the CCU at Allegheny General has not had one single CLAB.

“There’s a little swagger among the staff,” muses Dr. Granato. As part of the celebration, the hospital is making t-shirts for the CCU team that proudly proclaims: The AGH CCU: “The Bug Stops Here!”

Almost as impressive as the CCU’s zero rate is the hospital-wide rate. The CDC’s measurement tool, the National Nosocomial Infection Surveillance System (NNIS) rate averages between 2 and 7 CLAB infections per 1,000 line days, depending on the type of intensive care unit. Hospital-wide, the NNIS rate at AGH hovers between 0.9 and 1.0 per 1000 line days, a remarkable achievement.

Now, the concept of “zero infections” is extending to other hospital-acquired infections like ventilator-associated pneumonia (VAP), antibiotic-resistant MRSA, and urinary tract infections (UTIs).

“VAP is a more difficult beast. It’s harder to define and treat, but we have standardized approaches to prevent it,” said Dr. Granato. The standardized procedures include a rapid ventilricular weaning protocol and preprinted VAP orders, which include: elevating the head of the bed 30 degrees, regular tubing changes and using chlorhexidine mouthwash twice a day. The VAP rate is down, not yet out.

Meanwhile, the CLAB work continues to expand. Through his Physician Champion work, Dr. Granato and team are re-engineering the entire process of central line insertion, not only to eliminate CLAB, but also complications like pneumothorax (introduction of air into the pleural cavity during insertion) and arterial puncture. They are working to halve insertion time, which now stands at 45 minutes, including time lost as nurses seek missing information or tools. By

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VA Pittsburgh MRSA work garners international attention

When German infection control experts visited the U.S. in March to collect information about MRSA control strategies, Pittsburgh figured into their itinerary.

Dr. Gerard Krause of the Robert Koch Institute in Berlin and Dr. Antina Barger, of Germany’s Ministry of Health in Berlin, visited the Pittsburgh Regional Health Initiative and Pittsburgh’s VA Hospital to gain a better understanding of protocols that helped VA clinicians record an 85 percent reduction in MRSA for post-operative patients.

The Pittsburgh protocols, which have become the basis for a nationwide VA Health System MRSA control program launched late last year, were developed largely through an application of Perfecting Patient Care (PPC) principles. Because of that, officials at the Centers for Disease Control and Prevention (CDC) advised the German scientists to stop in Pittsburgh.

That the use of PRHI’s PPC principles helped dramatically reduce cases of the potentially lethal infection came as no surprise to Dr. Krause because a large German study in which he participated showed that use of continuous quality improvement methods can make a big difference.

The study, performed in the late 1990s at 14 hospitals, showed that the mere implementation of surveillance methods improved MRSA control compared with hospitals that made no organized effort, Dr. Krause said. However, the study also showed that significant gains in MRSA control could be made when surveillance was coupled with “quality circles” for analyzing and improving practices, he added.

Dr. Krause, whose Institute serves as Germany’s equivalent of the CDC, and Dr. Barger said that MRSA is a top priority for their country’s health ministry. Their trip was intended to see if the U.S. had adopted any programs or practices that Germany might also find valuable. Among other efforts, they found public awareness campaigns to ensure “prudent” use of antibiotics an important component of MRSA control.

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L-R: PRHI staffer Fran Sheedy Bost, PRHI CEO Karen Feinstein, PRHI Director of Chronic Care Mimi Priselac; Dr. Antina Barger, German Ministry of Health, Dr. Gerard Krause, Robert Koch Institute of Berlin; PRHI Education Coordinator Barbe Jennion, and PRHI Chronic Care Coordinator Tania Lyon.
NRHI summit addresses reimbursement

Said Miller, “People across the country working to improve healthcare quality and contain costs are increasingly frustrated by healthcare payment systems that do not reward efforts to improve healthcare quality, and often financially penalize them. The goal of this national Summit is to accelerate thinking about how healthcare payment systems can be redesigned to reward quality as well as reduce costs.”

The meeting was designed to find ways to change current health care payment systems to enable true value-based purchasing; and build consensus and identify ways to do so. There’s already growing consensus that healthcare systems are not currently providing the highest quality care for the money being spent—which means that better care could be provided for less money.

Two factors stand out: intractable system problems, for which PRHI offers the Perfecting Patient Care™ improvements; and financial penalties or disincentives for providing lower-cost, higher quality care. Improving the system and the quality of its care provides one piece of the puzzle; but an even bigger incentive can be provided by aligning quality and patient outcomes with appropriate payment.

Summit speakers

Speakers included Mark B. McClellan, MD, PhD, former CMS administrator and FDA commissioner, now working with the Brookings Institute on improvements in high-quality, innovative, affordable health care. Dr. McClellan said that Medicare is funding a range of demonstration programs that will move away from the current reimbursement system, under the broad rubric of shared savings. He sees value in regional collaboratives’ ability to expand on outcome measures—either those already being defined and measured nationally, streamlining and standardizing the process, AGH hopes to improve patient outcomes and liberate nursing time.

What has changed: what hasn’t

Hospital culture at AGH has changed for the better, with nurses a more active member of the team. “The culture change in this one area will make it easier to introduce improvement in other areas,” says Dr. Granato. “Three years ago, we felt like we were on a walk in the wilderness. But with results like these, it’s going to be an easier sell for other improvements. That said, change is always difficult.”

What hasn’t changed is leadership’s support for ending hospital-acquired infections. That commitment continues to trickle down to each unit. As it has every week for the past three years, the CCU has a weekly Bug Meeting, open to every staff member who works in the unit. Three years ago, the meeting focused on reviewing every CLAB. Now, with no more CLAB to review, the group is turning its attention to a one-by-one review of VAP, MRSA and other infections.

Like his predecessor Dr. Shannon, Dr. Granato fairly beams about the staff and its willingness to do the hard work necessary for improvement. “I’m very proud of the nurses, and also of the residents,” he says. “They’ve all come through, and everyone benefits.”

The Bug Stops Here: Allegheny General Hospital celebrates one year with ZERO central line infections in the Cardiac Care Unit
and those selected region by region. He singled out NRHI for its potential to become a coalition of learners.

McClellan singled out Medicare Section 646, which allows regional collaboratives to experiment with shared savings design.

“Document that you are saving money and keeping quality, and Medicare will pay. If you are willing to take on the risk, and your approach will lead to overall cost reduction, Medicare will pay,” he said. He warned, however, that such collaboratives must be cautious about antitrust concerns.

In his remarks, Peter V. Lee, JD, CEO of the Pacific Business Group on Health, noted that consumers’ out-of-pocket expenditures for premiums and co-pays accounts for over 15% of the healthcare dollar, an amount nearly equal to Medicare. Physician pay accounts for less than 20% of health care spending: imaging, tests and procedures account for about 95% of expenses.

Lee called for improving the quality of what is being measured, noting that 70% of care rendered is not evidence-based. He believes that a “pay for performance” scheme layered on top of the current reimbursement system may lead to some temporary or incremental improvement, but not to the long-term, fundamental change that is required.

“There are concrete things we can do locally to frame where payers should go nationally,” he said. Lee also challenged participants to envision a reimbursement system that encouraged diet and exercise management for people at risk for cardiac disease, one that paid more for cardiac procedures in patients adhering to such a program.

Rounding out the opening remarks was Elliott Fisher, MD, MPH, Professor of Medicine at Dartmouth and Senior Associate of the Veterans Affairs Outcomes Group at White River Junction VA Hospital. Fisher described Dartmouth’s studies on the harm from too much care.

Dartmouth has shown that higher spending regions of the country have up to 30% more beds, but worse technical quality and worse patient outcomes. Paradoxically, patients and clinicians in these regions of plenty harbor a perception of scarcity. And while such regions may have as many as 70% more specialists, it is more difficult to actually see one than in other areas of the country.

Fisher said, “The underlying problem is that the clinical culture leans toward growth.” The solution, he believes, will include a shared savings model.

Echoing the other speakers, Fisher called for more balanced information on risk vs. benefits; quality and cost; and a payment system that rewards better outcomes, not more care.

“When you introduce models of shared savings, the incentives fundamentally shift,” he concluded.

Fisher challenged the participants to come up with measurable goals based on five questions:

1. How will the proposed payment approach foster accountability for future growth?
2. How will it affect overall utilization?
3. How will it foster integration across full continuum of care?
4. Will it work better than other approaches like capitation or fee-for-service?
5. Measurement: how will we know?

**Breakout Sessions**

Four breakout groups worked toward recommendations for a framework for change. The groups included:

- **Prevention.** This group worked on recommendations that would lower the barriers to preventive care and incline the system more in that direction. Services need to be linked to outcomes.

- **Major Acute Episodes.** This group dealt with better ways to pay for, and encourage the use of, best-practice treatment for illnesses such as stroke or heart attack. The group recommended finding a way to encourage patients to use high-quality, low-cost providers of such services.

- **Stable Chronic Conditions.** Extinction is forecast over the next two decades of the American primary care physician as we know it. Keeping people with chronic conditions healthy while strengthening the profession of people who care for them is seen as a double-challenge. Any reimbursement system should provide measurable improvements for both, in addition to improved efficiency and better outcomes.

- **Unstable Chronic Conditions/End of Life.** More than specialists and high-level interventions, people nearing the end of life may need more coordination of care instead. Yet fewer than 20% of physician practices can offer care coordination services. Can a case-managed approach work well in urban and rural areas? This group proposes to test various reimbursement options to incline care more toward what patients need.
**Update**

**Statewide infection reduction projects show results**

Collaborating on the *Reducing Healthcare Acquired Infections Demonstration Project* are the Jewish Healthcare Foundation (JHF), the Pennsylvania Health Care Cost Containment Council (PHC4), and five diverse hospitals across the state. They are examining evidence-based standards of care and the financial impact of healthcare-acquired infections (HAIs).

Hamot Medical Center and Holy Spirit Hospital are reducing central line associated bloodstream infections (CLAB); Lehigh Valley Hospital and Health Network and Charles Cole Memorial Hospital are tackling catheter-related urinary tract infections (CAUTI); and Thomas Jefferson University Hospital is reducing ventriculostomy-associated infections (VAIs) in stroke patients.

As a prerequisite for participation, hospitals agreed to disclose information to the group for purposes of learning, such as: HAI information, clinical and financial data, costs and insurer reimbursements.

Project Update

In December’s *PRHI Executive Summary*, we described some of the challenges involved in reducing HAI and tracking the associated costs necessary to make a strong business case for reducing infections and increasing quality.

A day-long completion summit was held in State College, PA in December, attended by all project teams, Grant Sponsors and project staff from JHF and PHC4.

Teams from each hospital detailed their successes and what they learned. (The results are shown above, left.)

While preliminary, these findings suggest at least one reason for the slow spread of HAI reduction efforts. The demonstration projects illustrated some of the difficulties in collecting and analyzing high quality data. Roger Mecum, MD, Executive Vice President of the Pennsylvania Medical Society, followed this presentation with a discussion of State Trends and Initiatives.

Next Steps

With the encouragement and support of Michael Forlenza, PhD, JHF Director for Strategic Research, four of the hospitals agreed to publish their findings jointly in a special issue of the *American Journal of Infection Control*. Final manuscripts are in preparation and we hope to see the results in print by summer 2007.

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**All pilot sites reduce infection rates**

- Hamot Medical Center reduced CLAB by 41%.
- Holy Spirit Hospital’s had zero CLAB in 2 out of 3 of their ICUs for 2006.
- Charles Cole Memorial Hospital decreased CAUTI by 36%.
- Lehigh Valley Hospital reduced CAUTI by 23%.
- Thomas Jefferson University Hospital decreased VAI by 82%.

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**First hospital in the region**

**West Penn achieves Magnet Hospital status**

In 2003, few local hospitals knew much about the American Nurses Credentialing Center (ANCC) Magnet Recognition Program®. A March 2003 summit, sponsored by the Jewish Healthcare Foundation, helped acquaint the region’s hospitals with the attributes of Magnet Certification. But even as the summit was being held, Sherry Zisk’s team at The Western Pennsylvania Hospital (West Penn) had been off and running with the application process for months.

When West Penn received word last December that the hospital had been selected for Magnet status, Zisk points out, it was the end of a three-year journey that now places West Penn in elite company. The Commission on Magnet Recognition Program® recognizes just 225 health-care organizations in 42 states, and one in Australia, for excellence in nursing service. Of 10 Magnet Hospitals in our state, West Penn is the only one in Western Pennsylvania.

ANCC’s Magnet program advances three goals:

1. Promoting quality in a setting that supports professional practice;
2. Identifying excellence in the delivery of nursing services to patients/residents; and
3. Disseminating “best practices” in nursing services.

Said Zisk, “It is a lot of hard work, and the result is not just a designation. The most important thing is what you achieve along the way. By focusing on meeting the standards, finding out what you need to do and prove, you..."
end up making big strides in quality improvement and staff leadership.”

Zisk hopes other hospitals will go through the certification process. She stresses that, although the focus is on nursing, it’s a whole-hospital experience that requires full leadership commitment and a staff involved in decision making at every turn.

One measure of the success of the Magnet program is nursing turnover. The American Society for Healthcare Human Resources Administration (ASHHRA), a personal membership group of the American Hospital Association shows an average vacancy rate among nurses at tertiary care organizations as 7%--West Penn’s is just 2%. Likewise, RN turnover is measured nationally at 11%--West Penn has less than 9%.

The journey isn’t over, either. Magnet is a four-year designation. “We’ll have to do the whole process all over again,” says Zisk. “Really it is a journey and you never get there. It’s all about continuous improvement, not resting on your laurels.”

http://runningahospital.blogspot.com/

Hospital CEO blogs infection rates

A recent article in the Boston Globe* drew attention to a high-profile hospital CEO who started a blog last August. While that revelation itself might not have caused a stir, the fact that CEO Paul Levy was posting Beth Israel Deaconess Medical Center’s central line infection data certainly did. BIDMC is a Harvard teaching hospital and one of the nation’s leading medical institutions. Mr. Levy posts the infection data for all to see, along with other topics of concern and interest at, runningahospital.blogspot.com/. In a recent telephone conversation, Mr. Levy explained his hopes for the open talk.

Q: What made you decide to post your infection rates?

There are three reasons, really. One is human nature: well intentioned people do better when they think someone is watching. Second, I would like for people to see that our hospital culture is open and transparent. The honesty makes people feel good. The third thing is the comparison issue. This is not a matter of competition between hospitals. It’s a way of saying to the public, academic medical centers are under pressure as health care dominates the public agenda. If you are expensive, what do you offer? Posting our rates gives the clear sense that we are at vanguard of making quality improvements.

Q: There’s always some controversy about when you call it an “infection,” and when you call it “hospital-acquired.” How do you define and count central line-associated bloodstream infections?

We use the CDC definition. It may not be the absolutely perfect way to count, but it’s consistent, and it’s what we’re using. Imagine a website where hospitals post how they keep track, and whether the infection numbers go up or down. Since the mechanism for counting might vary, the question is, “If the numbers are different, how do we normalize?” My answer is, whatever method you use, did the numbers get better or worse relative to the first month you kept track?

Q: What has been the reaction to your blog among the public and the staff?

I inherited a hospital with a culture of transparency, and the staff loves it. The doctors love it. I get notes from staff members saying thanks, and being proud to be the place in town that is open and transparent. The public is interested, too, and the number of hits on the blog keeps rising.

Q: How close to real time are the numbers?

We view every infection as a sentinel event and walk backwards through it to find out what happened and fix it. Two weeks later the numbers are posted.

Q: Sometimes just watching will cause a dip in numbers. What are you doing to sustain the gain?

We train everyone. Previous residents may have learned years ago, and techniques vary. Everyone is being trained to insert and maintain lines in the same way. We created a kit so all of the right supplies are ready every time.

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**Calendar, Winter 2007**

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