

PRHI Executive Summary

September 2001

PRHI Cardiac Forum

Friday, October 12, 3 — 6 p.m. and Saturday, October 13, 8:30 a.m.—11:30 am
The Western Pennsylvania Hospital Conference Center
4800 Friendship Avenue

Special Guest Speakers

Gerald T. O'Connor, PhD, Director, Data Registry
Northern New England Cardiovascular Disease Study Group

William Nugent, MD, Director, Cardiothoracic Surgery
The Dartmouth-Hitchcock Medical Center

We will be introducing PRHI's own Cardiac Data Registry and discussing its potential for dramatically improving outcomes for cardiac bypass patients. Open to all clinicians working with cardiac patients. If you do not receive an invitation, please contact Tony Kelly at 412-594-2567 or kelly@jhf.org or Helen Adamasko 412-594-2581 at adamasko@jhf.org

Why make ZERO the goal?

More than one eyebrow raised when PRHI's first chair Paul O'Neill suggested that we set our safety and quality goals "at the theoretical limit of human performance." What he was suggesting was that we set our goals for zero errors and perfect clinical outcomes. Over the six months of discussion that led to our adopting the elimination of medication errors and nosocomial infections as our patient safety goals, many PRHI participants wondered about the appropriateness and tactical wisdom of establishing such goals.

After all, in the case of nosocomial infections, it was pointed out, we do not yet understand the basic biology of some of the bacteria and how they spread. *Continued, page 5*

Washington Hospital Charter

Washington Hospital has notified PRHI of its acceptance of both the patient safety and clinical initiative charters.

PRHI welcomes our colleagues at Washington Hospital. We look forward to their interaction and contribution to our efforts.

CDC Expands Support

The Centers for Disease Control and Prevention is engaged in a unique partnership with PRHI Patient Safety, helping our member hospitals manage, analyze and report central line associated bloodstream infections. Now, the CDC has invested \$370,000 in the PRHI partnership to support two projects:

- ⇒ The growing problem of antibiotic-resistant bacterial infections (specifically, methicillin-resistant *Staphylococcus aureus*, or MRSA).
- ⇒ A complementary educational pilot program for preventing antimicrobial resistance.

Local project wins distinction

The Highmark Radiation Oncology Program, a community wide project linking radiation oncology measures with patient outcomes, has won the Best of Blue National Award in the *Innovation in Health Management* category. The program *Continued, page 2*

Inside ...

Clinical Initiatives	2
Center for Shared Learning	3
Patient Safety	4
Partner Spotlight	5
October Calendar	6
Progress Report	7



Clinical Initiatives

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PRHI's partnership among clinicians, businesses, hospitals and insurers aims to achieve perfect patient care in five pilot areas by constructing outcome data that caregivers trust; and supporting collaborative efforts to improve care based on those data.


First cardiac forum scheduled

- ⇒ How can surgeons be sure that their methods are most likely to bring their patients the best possible outcomes?
- ⇒ Has anyone ever looked at the patients who do well after cardiac surgery, and linked those outcomes to the surgical techniques that were used?
- ⇒ Is anyone tracking which patients get better fastest, and why?
- ⇒ Can you really define quality?

Information from the cardiac outcomes report will be shared at the Cardiac Forum October 12 and 13 at West Penn Hospital. The Forum is open to all clinicians and healthcare workers who deal with cardiac bypass patients.

Depression and Diabetes Work Continue

- ⇒ The **Depression Working Group** is pursuing grant funding to link primary care physicians and psychologists to better treat this pervasive condition in our region. Physicians, managed care plans, employers, and hospitals came to the table to develop and release the Depression report showing gaps in continuity, and this award would help design systems and financing that would begin to fill these gaps.
- ⇒ The **Diabetes Subcommittee** will review an planning document for interventions as it continues to work with HC4 to create an outcomes report. Due date for report delivery is still slated for October 2001. ❄



WHICH
PATIENTS GET
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FASTER, AND
WHY?

Intrigued by these questions, and encouraged by the successes of the Northern New England Cardiac Surgeons' group, PRHI's Clinical Initiatives just took a quantum leap forward.

Pittsburgh's cardiac surgeons have spent months creating a database that will quantify 87 separate outcomes for cardiac bypass surgery, and link them to the processes of care that led to them. For example, did the patient develop the heart arrhythmia known as atrial fibrillation? Did he/she develop a surgical wound-site infection? What precise technique did the surgeon use that might be responsible for the outcome—good or bad?

Local project wins distinction

Continued from Page 1

tracks outcomes and provides decision support at the time of patient treatment for cancer. The award cited the program's cross-institutional and multidisciplinary collaboration; program design; transference of physician decisions; and use of cutting edge information technology.

PRHI's Clinical Advisory Committee has been discussing a formal link between the radiation project and PRHI's other clinical outcomes projects. For further information about the Radiation Oncology Program, contact Keith Morgenlander at keith.morgenlander@highmark.com

Center for Shared Learning

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The mission of PRHI's Center for Shared Learning (CSL) is to support the testing and implementation of a system-based approach to healthcare management, drawn from the Toyota Production System (TPS) and Alcoa Business System.

The ZERO goal—beyond benchmarking

Healthcare providers work tirelessly to deliver excellent care. Yet today's flawed healthcare delivery system makes error and waste almost inevitable. How can such a frustrating system be transformed into one that supports its workers while providing patients with the world's best care? What would the sustained pursuit of excellence look like in a perfect system?

Establishing ZERO errors as the goal has sometimes been called unrealistic. But "benchmarking" against everybody else's error rates limits our view of what is possible. Aiming for today's "best practice" is aiming for tomorrow's obsolescence. And once the organization gets "there," to some artificial midpoint, efforts at improvement usually stagnate or regress.

In introducing a form of TPS at Alcoa, Paul O'Neill encouraged everyone to reach for the theoretical limits of their performance—the very limit of scientific possibility for perfection. It's the *effort* to approach ZERO errors that encourages workers to think more and more creatively, taking bolder steps to achieve results they might not even have dreamed possible. Every day people create the new "benchmark," and invent the new, improved "best practice." Constantly working toward a goal that's not attainable—perfection—sets the cycle of incremental improvement into perpetual motion.



In such an organization, every person agrees upon the overall ideals, and works collaboratively toward them. At PRHI, for example, our goal is "delivering perfect patient care." In the TPS system, this goal ideally means delivering to patients:

- ◆ What they need,
- ◆ On demand,
- ◆ Defect-free,
- ◆ One at a time,
- ◆ Immediately,
- ◆ With no waste,
- ◆ In a safe environment.

Workers always have this unimpeachable goal to refer to: it's their "True North." As people work together in this system, they begin to realize that their collective will and wisdom are greater than any one person's.

Using the discipline of TPS' rules in use, workers may make hundreds of thousands of small improvements over time. Yet these improvements—rather than colliding with one another—build upon one another, because each problem is analyzed and solved right down to its root cause, and the solution moves the system closer to the ideal.

Such a system, where everyone in the organization is constantly working together to improve, will create an environment where patients come first, and where employees feel great satisfaction. ❁

SETTING ZERO
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 ENCOURAGES
 BREAKTHROUGH
 THINKING,... AND
 KEEPS PEOPLE
 PUSHING TOWARD
 THE GOAL.

-TREASURY SECRETARY
 PAUL H. O'NEILL
 BEFORE THE SENATE COMMITTEE
 ON HEALTH, EDUCATION,
 LABOR, AND PENSIONS
 MAY 24, 2001

Patient Safety Programs

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PRHI partners are working collaboratively to eliminate two major patient safety concerns: healthcare-acquired infections and medication errors.

CDC partnership expanded

PRHI's unique partnership with the Centers for Control and Prevention (CDC) is yielding a portfolio of infection control programs that will help move us closer to our goal of **ZERO** hospital-acquired infections.

PRHI's hospital-acquired infection reporting system is based on the CDC's National Nosocomial Infections Surveillance System (NNIS). Our colleagues at CDC are managing, analyzing, and reporting our regional data. They are working with PRHI to explore the application of the Toyota Production System to infection control.

Additionally, the CDC has committed \$370,000 and substantial professional resources to explore the application of the Toyota Production System (TPS) and educational programs for infection control. The joint projects will address the growing problem of antibiotic-resistant



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bacterial infections (specifically, methicillin-resistant *Staphylococcus aureus* (MRSA)) by:

- 1) Applying TPS to create processes capable of maximizing compliance with established practices designed to improve detection of patients infected or colonized with MRSA and reduce its transmission.
- 2) Introducing complementary education for preventing antimicrobial resistance. Funds will be used to support personnel, training, development of intervention tools and skills, integration of information systems, evaluation, and project administration.

Bloodstream infection work continues

The regional reporting system for central line associated bloodstream infection (BSI) is in place. Participation thus far:

- ⇒ 29 facilities with 59 intensive care units are participating.
- ⇒ 57 units have provided data for April through June 2001.

The initial report will be reviewed in September 2001.

Reporting capacity is key in building a common foundation for continuously improving work processes, changing industry culture, and reaching patient outcome goals. Over the next several months, BSI prevention programming—such as recommended practices, augmented reporting, and educational support—will be rolled out.

In addition, PRHI intends to address MRSA utilizing a similar approach and is identifying areas in which our infection work complements the efforts of PRHI's clinical programs. ✿

Why Make ZERO the Goal?

Continued from Page 1

So it would be “impossible” to get to zero today. These friendly skeptics cautioned that we didn’t want to seem naïve about the current state of knowledge, or the complexity of the systems involved, or the time it would take to make change.

The response to these arguments was simple, and based on O’Neill’s analysis of other initiatives trying to change systems. Many fail and few succeed.

First and foremost, zero goals are ethically irrefutable. Aiming to reduce medication errors by 50% may seem laudable. But, as Mr. O’Neill starkly asked, “Who volunteers to be in the 50% we

don’t prevent?” Establishing zero as the goal is vital in creating unambiguous, unimpeachable objectives that can unite everyone working in a complex enterprise, such as healthcare delivery.

Second, setting a goal at zero establishes the principle that no error should occur, and that each error should be learned from so that it isn’t repeated elsewhere in the organization or community. Changing a complex system, then, resides at the level of each patient and worker – the only level at which systems begin to change.

While progress against

complex problems comes in increments, to set incremental goals risks complacency. Aiming for “better than average” risks satisfaction with “better than average.” Furthermore, such improvements may prove transitory. How many gains, after initial enthusiasm, go on to disappear within months?

Setting the goal at ZERO encourages breakthrough thinking, orients work cultures toward constant, enduring gains, and keeps people pushing toward the goal.

And when we come up against the lack of understanding about some of the bugs causing nosocomial infections? Let’s make sure that Pittsburgh gets in line for those NIH grants that will enhance our understanding. ☼

PRHI Partner Spotlight

Clinical Advisory Committee—Diabetes Working Group

We are always updating our lists. If you note errors or omissions, please call Tony Kelly at 412-594-2567

Ms Doreen Bonicky, R.N.
Quality Improvement Manager
Preferred Primary Care Physicians

Dr. Daniel Brooks, M.D.
Vice President and Chief Medical Officer

Heritage Valley Health System, Inc.
Diabetes Health Management
UPMC Health Plan

Dr. Frank Civitarese, M.D.
Preferred Primary Care Physicians

Dr. Nicholas DeGregorio, M.D.
Preferred Primary Care Physicians

Dr. Paul W. Dishart, M.D.
Director, Medical Education
UPMC St. Margaret

Mr. Samuel A. Friede, F.A.C.H.E.
Sr. Consultant, Public Affairs & Community Liaison
VHA Pennsylvania

Dr. Marlene Garone, M.D.
Vice President, Operations
West Penn Hospital

Dr. Thomas P. Gessner, M.D.
Medical Director
Latrobe Area Hospital

Dr. Alejandro Gonzalez, M.D.
Renal Endocrine Associates PC

Dr. Murry B. Gordon, M.D.

Dr. Sharon Kiely, M.D.
Department of Medicine
Allegheny General Hospital

Ms. Charmaine Spaniel Mozlack
Manager, Strategic Directions
Carnegie Library of Pittsburgh

Dr. John Reefer, M.D.
Butler Medical Associates

Ms. Linda Ruhl
PA-C Director, Quality Management
Highmark BlueCross BlueShield

Dr. Ralph Schmeltz, M.D., F.A.C.P., F.A.C.E.
Endocrinology, Diabetic Mellitus
UPMC Health System

Dr. Linda Siminerio, R.N., Ph.D.
Executive Director
University of Pittsburgh Diabetes Institute

Dr. Francis X. Solano, Jr., M.D.
UPMC Health System

Dr. Thomas Songer, Ph.D., M.Sc.
Assistant Professor
University of Pittsburgh School of Medicine

Dr. Cliff Waldman, M.D.
Medical Director, Western
HealthAmerica

Dr. Janice C. Zgibor, R.Ph., Ph.D.
University of Pittsburgh

Note: Members of other Clinical Work Groups will be featured in future Partner Spotlights.

Coumadin errors cost lives excerpt from *Philadelphia Inquirer*, Sunday, August 12, 2001

Another reminder of the importance of the work we are doing . . .

On Ninth Street, Marlene Branca said medical workers spent seven hours trying to stop her bleeding.

On Eighth Street, Gennaro Molinari suffered bruises and bleeding gums after he was given too much of the blood-thinning drug Coumadin.

On Seventh Street, Louis Vitello is dead.

Talk to neighbors on almost any block deep in South Philadelphia, and somebody has a friend or relative affected by the laboratory error at St. Agnes Medical Center on South Broad Street.

More than 900 people were notified by the hospital that its laboratory made a serious error in analyzing their blood tests.

For many, such as Daniel Foresta, the July 27 letter was the first sign of a problem. Foresta, 74, said he had felt no ill effects and expressed confidence in the hospital.

"I was treated very, very good at that hospital," he said. "[Even] the food was good."

But hospital officials say they are "reasonably certain" that the mistakes in the lab caused two deaths. And the Medical Examiner's office is investigating whether the errors may have hastened or caused three other deaths. Vitello's death is among those being investigated.

Patients and their families are beginning to tell stories of how the lab

errors affected their lives.

And some doctors are still learning that they prescribed improper doses of powerful medication because of the miscalculations, which went undetected from June 4 to July 25.

St. Agnes physician Mina E. Mark insists that there were no warnings, no whistles, no alarms.

Day after day, the lab results showed that her patient Catherine Hines had blood that was coagulating too quickly.

So Mark gave her more and more blood thinner.

As St. Agnes officials later acknowledged, their lab was incorrectly calculating blood-clotting rates, an important factor for doctors who prescribe blood thinners to patients with heart problems or blood clots in the legs or lungs.

Too much of those drugs can lead to excessive bleeding and bruising; too little can make the patient vulnerable to strokes.

Hines, 76, lives on 21st Street, a mile from the hospital. She was admitted to St. Agnes for dehydration on May 29, six days before the lab mistakes began.

Physicians gave Hines intravenous fluid for the dehydration and, because she'd been taking Coumadin for heart trouble, began monitoring her blood.

On June 4, her medical records show, the lab reported that Hines' blood was clotting too fast. In reality, her clotting time was on target.

Unaware that the lab results were skewed, Mark steadily increased Hines' Coumadin dosage from 6 milligrams to 8 milligrams.

On June 13, the lab reported that Hines' blood reading was in the right range. In reality, it was dangerously high - three times higher than it was supposed to be.

On July 1, the St. Agnes lab said Hines' blood level was normal. She was discharged the next day.

In an interview, Mark said Hines seemed to be stabilized.

"She was fine when she left," Mark said.

But she wasn't.

"Clearly she was not fine," said Hines' attorney, Aaron Freiwald, who is suing the hospital over the lab errors. "The facts will speak for themselves."

When a home-health nurse tested Hines' blood on July 14, it showed her blood was seriously thin. The nurse rushed Hines to St. Agnes' emergency room.

Using its flawed test, the lab reported that Hines' blood looked fine. She was sent home.

On July 18, Hines' husband found her lying on a blood-stained bed. This time, she went to Thomas Jefferson University Hospital, where doctors discovered she was bleeding internally, Freiwald said. ✻

Calendar at a glance, October 2001*

Tony Kelly, Administrative Coordinator
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Oct 8	CoChairs Lunch	12-1:30 pm
Oct 9	Adverse Drug Event Advisory Committee Center for Shared Learning Information Session	3-4:30 pm 6-9 pm
Oct 12-13	Cardiac Forum, West Penn Hospital	
Oct 16	Grantmakers in Health site visit, site TBA	All day
Oct 18	Buying Healthcare Value Clinical Advisory Committee	2:30-4 pm 6-8 pm
Oct 23	Center for Shared Learning Information Session	6-9 pm

*all meetings at JHF offices unless otherwise noted

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Progress Report



This month has marked increased participation in the MedMARx medication error and National Nosocomial Infection Surveillance (NNIS) reporting systems.

PRHI Partner	NNIS Blood Stream Infect'n Report to CDC			MedMARx med. error report sys.	
	4-01	5-01	6-01	Con-tract?	System in use?
Butler Memorial Hospital*					
Children's Hospital of Pittsburgh					
HealthSouth Rehab. Hospitals	n/a	n/a	n/a		
Heritage Valley Health System, Inc.*					
Sewickley Valley Hospital					
Medical Center—Beaver					
Latrobe Area Hospital*					
Lifecare Hospitals of Pittsburgh, Inc.	n/a	n/a	n/a		
Monongahela Valley Hospital, Inc.					
Ohio Valley General Hospital					
Pittsburgh Mercy Health System					
Mercy Hospital of Pittsburgh					
Mercy Providence Hospital					
South Hills Health System					
Jefferson Hospital					
St. Clair Memorial Hospital*					
St. Francis Health System					
Uniontown Hospital					
UPMC Health System					
Bedford Memorial					
Braddock					
Horizon					

PRHI Partner	NNIS Blood Stream Infect'n Report to CDC			MedMARx med. error report sys.	
	4-01	5-01	6-01	Con-tract?	System in use?
UPMC, continued					
Lee Regional					
Magee Womens Hospital					
McKeesport					
Passavant					
Presbyterian					
Rehabilitation Hospital	n/a	n/a	n/a		
Shadyside					
South Side					
St. Margaret					
Western Psychiatric Institute	n/a	n/a	n/a		
West Penn Allegheny Health System					
Allegheny General Hospital					
Allegheny Valley Hospital					
Canonsburg General Hospital					
Forbes Regional					
Suburban General					
West Penn Hospital					
Westmoreland Health System					
Frick Hospital					
Westmoreland Regional Hospital					

* Collaborating w/ national VHA Patient Safety Initiatives

