Pittsburgh Regional Healthcare Initiative

PRHI Executive Summary

August 2001

Why Top-Down Fixes Won't Work in Health Care . . . and Why *Leadership* Will

Ken Segel, PRHI Director

This month's *Executive Summary* has a common theme – data. It may not sound sexy, but the foundation of our enterprise and our chances of success hinge on how we use it. PRHI's central thesis is that the health system can only be improved by focusing on patients, at the point of care, and organizing the system to better help clinicians and patients identify and solve problems that arise there.

Our clinical improvement efforts began with mapping patient outcomes across the region. Why? Why is our next step to create registry and decision-support tools that help clinicians detect and apply the processes of care that lead to good patient outcomes?

In our patient safety projects, we are beginning with reporting and surveillance systems for important reasons. The next challenge is to make sure we use the data to make change.

Finally, our experiments with the principles of the Toyota Production System present a very different take on data collection and analysis. They emphasize identifying and solving individual problems, no matter how small, immediately, in the course of work. TPS does not rely on retrospective data sets at all! What are the lessons and linkages for the rest our work? Please look inside to explore these issues in greater detail.

Inside . . .

McGuinn and Rohr head Leadership Obligation Group

In events of note last month, Mellon CEO **Marty McGuinn** and PNC CEO **Jim Rohr** co-chaired their first Leadership Obligation Group meeting. They emphasized the importance of the opportunity PRHI represents for the region and their determination to help drive the process forward, according to schedule.

White House consultation

PRHI was again consulted by the Administration as President Bush readied his Medicare position, which he announced on July 12th. We continued to push the "5 P's:" data *platforms*, *professional* training, legal *protection*, *performance* research, and *payment* and regulatory incentives. (See June's *Executive Summary* for more details).

Some of these priorities were included in the President's reform principles, with direction that Medicare should support efforts "to improve care through more collaborative programs that use protected data on quality and safety."

More progress to report

Finally, please note our continued progress toward full implementation of MedMARx and the CDC's NNIS platform for catheter-associated bloodstream infections in ICUs.

As always, please contact us with questions, advice or concerns. —*KS*

Feinstein APIC keynote well

"Infection control can change the world," stated PRHI Chair, Karen Wolk Feinstein in her keynote address to the Association for Professionals in Infection Control and Epidemiology (APIC) held June 9-14 in Seattle. Excerpts from Karen's address, along with a summary of PRHI, form the basis for a lengthy front-page article in July's edition of the *Infection Control and Prevention (ICP)*

Patient Safety Programs

Ed Harrison
Director, Patient Safety
412.594.2584
harrison@jhf.org

It's not just data: it's how you use it

REPORTING SYSTEMS ALONE WON'T CREATE CHANGE: IT'S WHAT YOU DO WITH THE DATA THAT CREATES INFORMATION, KNOWLEDGE, LEARNING, AND SUSTAINABLE PROCESSES FOR IMPROVING HEALTHCARE DELIVERY.

PRHI's Patient Safety program is based on the understanding that healthcare professionals themselves can most effectively remedy process and performance problems in care delivery. In fact, when documented, considered, and used as the impetus for change, process breakdowns can actually represent opportunities to make systemic improvements. Each improvement drives us toward our ambitious goal of ZERO nosocomial infections and ZERO medication errors.

To start with, however, healthcare professionals need common mechanisms for identifying, evaluating, prioritizing, remedying, and tracking performance. PRHI's infection control and medication administration reporting systems are designed to assist in transforming **Data ► Information ► Knowledge ► Learning**.

World-class reporting systems

Accordingly, the initial focus of PRHI's Patient Safety effort has been to find and implement the most credible data collection platforms available in each area of inquiry:

1. The Centers for Disease Control and Prevention (CDC), the recognized leaders in infection control, are partnering with PRHI to establish a region-wide hospital-acquired infection reporting system based on the **National Nosocomial Infection Surveillance system (NNIS).** The system for collecting information about central line associated blood stream infections has been implemented with expansion planned to other areas of infection.
2. PRHI partners are also using **MedMARx**, a tool for tracking medication administration. MedMARx was developed by U.S. Pharmacopeia, based on the taxonomy developed by the National Coordinating Council on Medication Error Reporting and Prevention (NCC MERP).

How data drives change

While important, reliable reporting systems alone can not create change. It is with whom and in what context the data is shared and what is done with the data that creates information, knowledge, learning, and ultimately sustainable processes for improving healthcare delivery.

PRHI's operating committees—comprising representatives from participating

Data reporting schedule

Area of inquiry	Data cycle	Report release date
Bloodstream infection	April-June 2001	August 2001
Medication error*	July-Sept 2001	Oct/Nov 2001

*Note: this data will not represent all facilities under contract with MedMARx, as it will require substantial time and effort to phase in MedMARx reporting within facilities.

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

Clinical Initiatives

Jon Lloyd, M.D.
PRHI Medical Advisor
412.594.2566
lloyd@jhf.org

Geoff Webster
PRHI Co-Director
412.456.0973
websterchc@stargate.net

First reports near completion: Data registries to build on findings

WHEN PHYSICIANS HELP DEVELOP THE METHODS FOR MEASURING OUTCOMES, THEY ARE LIKELY TO BELIEVE THOSE DATA, AND TAKE UP THE TASK OF UNDERSTANDING THE PROCESSES THAT LEAD TO VARIATION IN THE OUTCOMES.

With a July release date for the Depression Report and an early fall release date on our fifth and final report on diabetes, PRHI has almost completed the first full round of clinical outcomes reports for the region. The hard work and diligence of the Clinical Advisory Committee, its subcommittees, and the Health Care Cost Containment Council (HC4) staff have given us our first full look at the current state of clinical practice across our region in the five clinical areas (depression and diabetes, plus obstetrical care, hip and knee replacement, and cardiac surgery).

Credibility: the case for data registries

In this process we have learned clear lessons that bode well for our collective capacity to improve outcomes among our regional healthcare providers. First and foremost, if physicians in a specialty are engaged in developing the methods for measuring outcomes, they will be likely to believe the resulting data on outcomes, and take up the task of understanding the processes that lead to variation in those outcomes.

This is why the Cardiovascular, Total Joint Replacement, and Diabetes work groups are beginning to develop registries that catalogue physiological as well as process measures. Tracking both will allow physicians to address fundamental differences in the way patients are cared for, and move towards perfect patient care based on the best available evidence-based knowledge.

Cardiac data registry

In the case of cardiac care, physicians, nurses, and data analysts are isolating only the necessary data elements that clinicians believe will lead to changing processes of care to prevent mortality and atrial fibrillation. Isolating these elements will allow the group, based entirely on evidence, to experiment with issues like prophylactic medication administration, duration of chest opening, or hundreds of other factors to rapidly improve upon and measure outcomes.

These new data registries will form the backbone of evidence based-improvement in our region and will lead to a detailed understanding of systems delivery and of processes of care that can drive constant improvements in the overall outcomes we measure.

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

Center for Shared Learning

Vickie Pisowicz
Director, CSL
412.594.2589
pisowicz@jhf.org

Dave Sharbaugh
Associate Director, CSL
412.594.2574
sharbaugh@jhf.org

Data in the line of duty

The use of data at our learning lines is different than the applications discussed for the clinical projects and patient safety initiatives. In these experiments, information does not come from spreadsheets of retrospective data—it comes from the work itself, in the present tense. Enormous time and attention are spent designing activities and work so that it is obvious immediately when actual performance does not meet expectations.

PROBLEMS, REPRESENTED BY SPECIFIC DATA POINTS, ARE SOLVED JUST BECAUSE THEY OCCURRED—NOT BECAUSE AN AGGREGATED LARGE-SCALE, OFF-LINE ANALYSIS SUGGESTED ATTENTION.

Real-time data from the work being done tells a worker if she is ahead or behind schedule, or if he is performing defect-free work. With precise waypoints and quality measures built into the system, workers know exactly how their work measures up before passing it along to the next customer.

For example, at one of our hospital learning lines we encountered a problem: Mrs. Smith did not receive her 9:00 a.m. Ecotrin.

Using traditional data-gathering, other quality improvement efforts might spend time trying to quantify the magnitude of this problem—How many times has this happened in a month? What is the percent of times that this happens? Is there a relationship between missed medication and causes? —before going on to evaluate the process.

With a learning line, that specific piece of data—Mrs. Smith's missed Ecotrin—has red-flagged the system about this failure to deliver as expected. Right then, that specific problem is solved to root cause by the team closest to the work. Problems, designated at specific data points, are solved merely because they occur—not because an aggregated large-scale, off-line analysis suggested attention.

Pharmacy workers at South Side Hospital work with Legos to describe how systems now exist—and how they could change and improve.

In a Toyota factory, as the assembly line moves at a fixed rate, a worker has exactly 57 seconds to perform a certain task. Seventy percent of the way into that task, a line is painted on the floor so that the worker knows if she is ahead or behind. In addition, the team leader for that work process can also gauge the status and can act to restore the system if there is a problem. Although patients are not cars, the use of data points can prove pivotal to work on the hospital floor.

If you would like to learn more about TPS' application to the healthcare setting, please join us for an information session. See *August at a Glance* on page 6 for dates and times, and call Tony Kelly at 412-594-2567 to reserve your space.

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.

PRHI Partner Spotlight

This month we feature members of our Funders Group, whose generous financial contributions are so vital. We also gratefully acknowledge our supporters who have donated resources in kind.

Local Foundations
Jewish Healthcare Foundation
Richard King Mellon Foundation
Hillman Foundation, Inc.
Benedum Foundation
Pittsburgh Foundation

Corporations and Business Associations
Alcoa Foundation
Chambers of Commerce Service Corporation
Mellon Financial, Inc.
USX Foundation
PPG Industries Foundation
Allegheny Technologies
AT&T
McKesson HBOC
SMC Business Councils
Kirkpatrick & Lockhart
Mine Safety Appliances
Pittsburgh Technology Council
Dollar Bank
DQE, Inc.
Federated Investors
FedEx Ground
National City of Pennsylvania
Dietrich Industries, Inc.
Equitable Resources
Giant Eagle, Inc.

National Foundations
The Robert Wood Johnson Foundation

An Expert on Health Care Evaluates His Own Case

from the *New York Times*, June 12, 2001

This interview with the late Dr. Avedis Donabedian represents food for thought for PRHI members. He speaks here with clarity from two perspectives—as a about the challenges facing health care.

Through his research on quality assessment in medicine, Dr. Avedis Donabedian of the University of Michigan became internationally known for his emphasis on the way the health care system functioned and how it might be improved.

In 1972, he began his own odyssey through the health care system —as a patient. Dr. Donabedian discussed his experiences last year in an interview with Dr. Fitzhugh Mullan, a contributing editor for the journal Health Affairs. The interview appeared in the journal this year. Dr. Donabedian died on Nov. 9 at age 81.

Here are excerpts from the interview.

Q. Tell me about your illness.
A. My current illness began in 1972 with symptoms of urinary infection. A subsequent exam and biopsy revealed that I had cancer of the prostate that had spread a little. I had a prostatectomy and cobalt therapy and, for many years, was in pretty good shape. I actually did much of the work for which I am known after the cancer manifested itself. Then, about 15 years ago, my prostate specific antigen began climbing, and I was placed on various hormone therapies and had more surgery. Technically I was ill, but I generally felt well and functioned at full speed.

About three years ago, however, I developed a narrowing of the urethra, resulting in a series of complications leading to infection and renal failure. I became very, very ill and was admitted to the hospital. The problems were compounded because the urologist and the nephrologist didn't agree on the nature of my problem or the best treatment for it. Since there was no meeting of the minds, they left it to me to decide what to do. To me! In the end, they discharged me.

At the University of Michigan, the outpatient and inpatient teams are entirely separate and my outpatient nephrologist discovered that I had a new growth — a bladder tumor. This led to more surgery and left me without a bladder or a rectum and lots of permanent tubes and pouches . . . Within the last several months, the prostate cancer has spread and I have metastases everywhere. Gradually, I'm getting weaker. But I can hobble around at home, and my pain is reasonably well controlled.

Q. What stands out in your mind about medical care as you've experienced it?
A. I would say that my view is generally positive . . . Still, there are areas where no one takes responsibility, where planning is weak, where I am left on my own. I have a primary care physician who visits me regularly, and this helps. But at a university hospital, residents from the different services control most things, and their coordination is

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Expert, continued

not always good.

Q. How do you feel about the quality of care you've received?
A. The view of quality that is taken in the hospital is really limited to technical competence and, more recently, to superficial attention to the interpersonal process. Keep the patient happy, be nice to the patient, call him Mr. or Mrs., remember his name. The idea that patients should be involved in their care is not really practiced in a responsible way. Today people talk about patient autonomy, but often it gets translated into patient abandonment. The doctor has to work diligently with the patient to arrive at a solution that is ultimately acceptable to the patient but is not entirely undirected. The role of the doctor is to actively make sure that the patient arrives at a decision that is a reasonable one for him or her, without being manipulative.

Q. In your experience, do systems of care work the way they are supposed to?
A. People have a big problem understanding the relationship between quality and systems. Many doctors seek refuge in the allegation that they are good clinicians but the system is wrong, without realizing that they are the key aspect of the system . . . The surgery outpatient clinic is an excellent and troubling example; it's a place I have frequently waited for extended periods. I once asked one of the nurses why the wait was so long. She responded that they had to wait until the residents on the inpatient service finished their work and came to staff the outpatient clinic. Meanwhile, the patients wait. The system is the problem . . . A plan exists on paper, but the system doesn't work.

Q. What was your sense of confidence in the day-to-day management of our care in the hospital?
A. I think the hospital floors are a disaster. I saw so many part-time nurses working variable hours. They come and go. Often I couldn't tell whether I was dealing with a nurse, a technician, an attending physician or an attendant. I saw rampant discontinuity in nursing care and many poorly oriented nurses, especially on weekends. I had a young nurse assigned to me one day who clearly did not know how to handle a colostomy.

"Do you know anything about colostomy management?" I asked her.

"No," she answered. "O.K., sit down. I'll teach you." She learned and thanked me profusely, but this was an unbelievable situation. . . Things won't improve until something is done about the design of the system.

Q. Why is this happening?
A. System management doesn't get taught in medical schools. Then you put doctors and nurses in charge of systems that are under constant short-term financial pressures. These pressures are real, but the purpose of good systems is to deal with them. The problem stems from a bit of myopia mixed with ignorance.

It's easy to train people to use a certain vocabulary — for instance, calling people "customers" to whom we offer "products" — but this doesn't really change the culture or the awareness of the clinicians . . . There's lip service to quality and, goodness knows, propaganda, but real commitment is in short supply . . .

We have all this shadow apparatus that doesn't really work — partly because nobody's listening and partly because the clinicians at the front lines are either unaware or are unable to make their voices heard. When the management doesn't pay attention, the clinicians will surely stop trying and the apparatus will fall by the wayside.

Q. Where do you see us headed?
A. I worry about my colleagues, the doctors. I'm a doctor, my son is a doctor and my father was a doctor — a country practitioner in the villages of Arab Palestine and my model for what a good physician should be. . . . I worry about the health care profession developing a kind of technician status and attracting only second-rate people. One positive aspect of the current chaos is that it is generating dissatisfaction on all sides . . . This country has tremendous wisdom and tremendous goodness. Eventually they will triumph in health care.

Calendar at a glance, August 2001*

Tony Kelly, Administrative Coordinator
412.594.2567, *kelly@jhf.org*

August 6	12-1:30p	PRHI Co-Chairs
	2-3:30	Patient Safety Executive Committee
August 7	8-11a	Nosocomial Infection Work Group
August 7	6-9p	TPS Information Session
August 14	3-4:30	Adverse Drug Event Advisory Committee
August 16	2:30-4p	Buying Healthcare Value
	6-8p	Clinical Advisory Committee (tba)
August 21	6-9p	TPS Information Session

*all meetings at JHF offices unless otherwise noted

CONTACT INFORMATION

KAREN WOLK FEINSTEIN
PRHI CHAIR
412.594-2555
FEINSTEIN@JHF.ORG

KEN SEGEL
PRHI DIRECTOR
412.594-2558
SEGEL@JHF.ORG

Progress Report

This month has marked more progress in patient safety reporting. Several additional hospitals have enrolled in the Med-MARx and National Nosocomial Infection Surveillance (NNIS) reporting systems.

PATIENT SAFETY REPORTING PLATFORMS IMPLEMENTATION PROFILE

	NNIS-based Blood Stream Infection Reporting System				MedMARx Medication Error Reporting System	
	Data Release Executed	Facility Profile Submitted	4/01 Data Provided to CDC	5/01 Data Provided to CDC	Contract Executed or In-Process	System In Use
PRHI Partners:						
Butler Memorial Hospital*						
Children's Hospital of Pittsburgh	X				X	
HealthSouth Rehabilitation Hospitals	n/a	n/a	n/a	n/a		
Heritage Valley Health System, Inc.*						
Sewickley Valley Hospital	X	X	X		X	X
Medical Center - Beaver	X	X	X	X	X	X
Latrobe Area Hospital*	X	X	X	X	X	X
Lifecare Hospitals of Pittsburgh, Inc.	n/a	n/a	n/a	n/a		
Monongahela Valley Hospital, Inc.	X	X	X	X	X	X
Ohio Valley General Hospital						
Pittsburgh Mercy Health System						
Mercy Hospital of Pittsburgh	X	X	X	X	X	X
Mercy Providence Hospital	X	X	X	X	X	
South Hills Health System						
Jefferson Hospital	X	X	X		X	X
St. Clair Memorial Hospital*	X	X	X	X		
St. Francis Health System	X				√	
Uniontown Hospital	X		X	X	X	X
UPMC Health System						
Bedford Memorial	X	X	X		X	
Braddock	X	X	X		X	
Horizon – Greenville	X	X	X	X	X	
Horizon-Shenango	X	X	X	X	X	
Lee Regional	X	X	X		X	
Magee-Women's Hospital	X	X	X	X	X	
McKeesport	X	X	X	X	X	
Passavant	X	X	X		X	
Presbyterian	X	X	X	X	X	
Rehabilitation Hospital	n/a	n/a	n/a	n/a	X	
Shadyside	X	X	X	X	X	
South Side	X	X	X	X	X	
St. Margaret	X	X	X	X	X	
Western Psychiatric Institute	n/a	n/a	n/a	n/a	X	
West Penn Allegheny Health System						
Allegheny General Hospital	X	X	X	X	√	
Allegheny Valley Hospital	X	X	X	X	√	
Canonsburg General Hospital	X	X		X	X	X
Forbes Regional Hospital	X	X	X	X	√	
Suburban General Hospital	X	X			√	
West Penn Hospital	X	X	X	X	√	
Westmoreland Health System						
Frick Hospital	X	X	X	X	X	X
Westmoreland Regional Hospital	X	X	X	X	X	X