Quality through Collaboration

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It is my privilege to be here today as a member of this panel to discuss with you the opportunity before us with regard to health care improvement. My name is Naida Grunden, and I am the Communications Director for the Pittsburgh Regional Healthcare Initiative, (PRHI), a position I have held since early 2001. Since then our region has learned many things together, through all kinds of peaks and valleys. I'm happy to share some of our experiences with you today.

In 1997, two people in Pittsburgh asked themselves why American health care, for all the miracles it produces, was so expensive, so poorly delivered, and so fraught with waste and error. Paul O'Neill, then CEO of Alcoa, and Karen Wolk Feinstein of the Jewish Healthcare Foundation asked an audacious question: *Why can't the great medical institutions of Pittsburgh deliver health care flawlessly?*

Intrigued by the question and by the notion of healthcare systems learning from one another—then further spurred by the eye-opening Institute of Medicine Report of 1999—45 hospitals, along with insurers, providers and plans eventually came together under the leadership of O'Neill and Feinstein to form the Pittsburgh Regional Healthcare Initiative. The work we've undertaken at PRHI suggests that great change is possible and confirms what more and more policy studies have concluded: that we can provide care of dramatically higher quality—and we can do it at half the cost. I'll be discussing four of our discoveries with you today:
1. All processes of healthcare are interrelated. If you improve quality of care, one patient at a time, you will improve everything.
2. We must tell the truth about the things that go wrong, and do it for the right reason: to learn why, take action and avoid repetition.
3. Aggregated, retrospective data are valuable as a starting point and a measure of success over time. But real improvement comes when problem-solving and data collection move to the point of patient care, where the action is.
4. We must have a much better understanding of what things cost.

1. Improve quality and you will improve everything. First of all, we are realizing that improving the quality of care delivery is central to solving the problems plaguing American health care. Skyrocketing healthcare costs, diminishing access to health insurance and health care, increasing harm to patients, the malpractice crisis, the nursing shortage and numbing morale problems across health care disciplines—all of these problems emanate from a system often distracted from delivering quality at the point of patient care. From the current hodge-podge system has emerged phenomenal waste and its evil twin, error.

Here is a graphic example of a system gone awry (Figure 1). This drawing was made during an observation in a hospital, and it is typical. It shows the steps necessary for a patient to get a newly ordered medication. Counting all the different ways the order can be conveyed, received and passed along, there are over 700 steps in the process. That is, there are 700 opportunities for error. Only through the dedication of heroic professionals do most patients receive the right medication in the right dose at the

right time. When you contemplate the effect that such a system has on quality, cost, patient satisfaction and worker morale, you begin to see how interrelated the problems are.
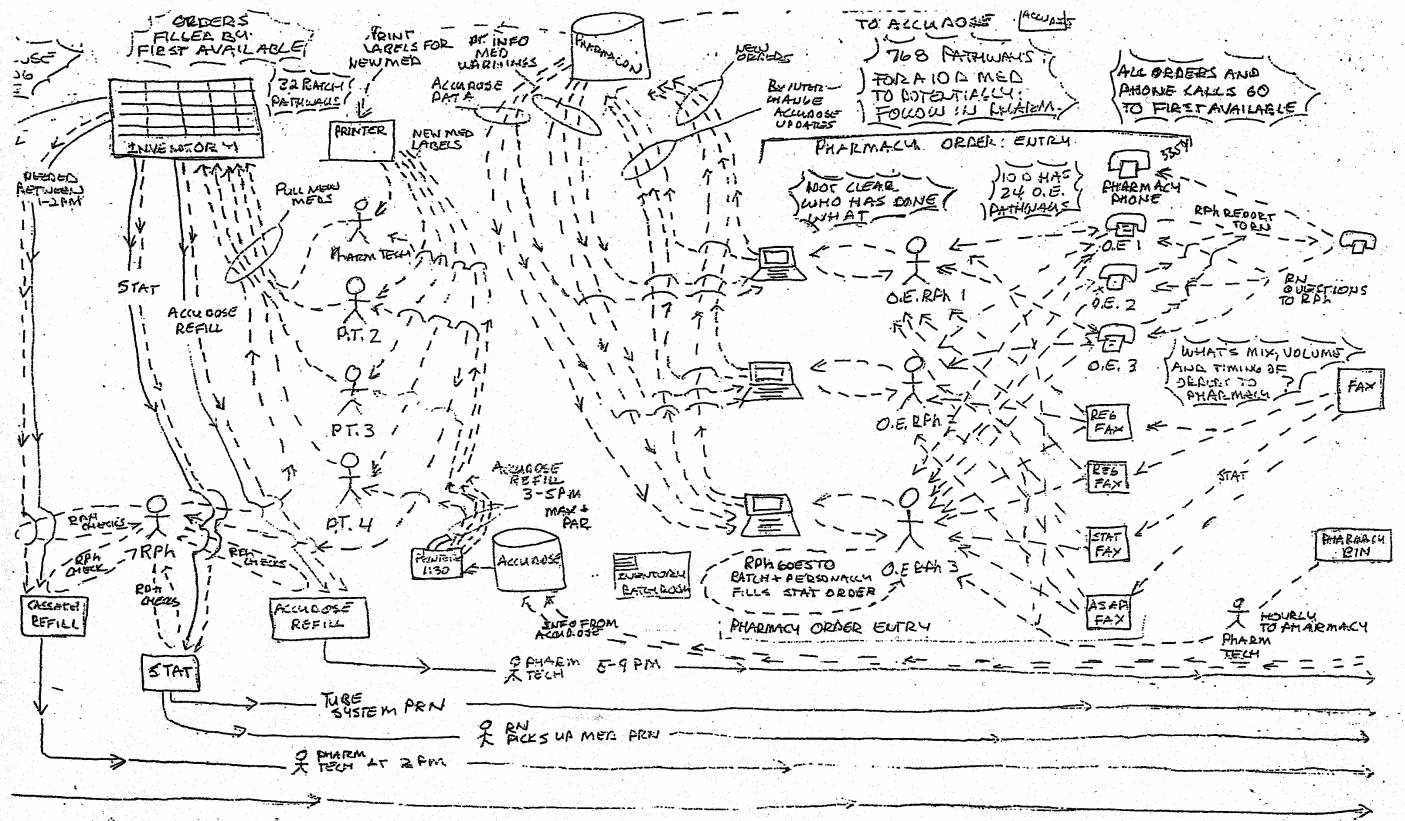

Figure 1. Getting the first dose of medication to a patient

2. Tell the truth about things gone wrong. The second lesson our region has learned is just how important it is to tell ourselves the truth about things that go wrong. But we have to do it for the right reasons. People are afraid to tell the truth about mistakes, believing that it will reflect badly on them or their institution, that they will be blamed, shamed or sued. When this belief takes hold, problems are buried, no learning takes place and repeating the mistake becomes inevitable.

Pennsylvania is the envy of many other states because of the combined power of the Pennsylvania Health Care Cost Containment Council (PHC4) and the Patient Safety Authority. Without PHC4 data, for example, Pittsburgh's cardiac surgeons would never have learned the truth about patients who had to be readmitted following CABG surgery. It's an important piece of information, because patients who have to be readmitted have the same risk of dying as they do when they first undergo the surgery. Physicians generally believed that their readmission rates were about 4 or 5%, not perfect, but not too alarming. Actual data showed same-hospital readmission rates around 7 or 8%. But there was no way of knowing which patients from rural areas might have been readmitted to their own local hospitals. PHC4 data, which tracks readmissions by patient identification, revealed the true dimension of the problem. Cardiac surgeons were shocked and galvanized into action when they learned that the regional readmission rate actually hovered closer to 17%. Working together on the regional Cardiac Registry, Pittsburgh-area

physicians have watched the readmission rate decline. As Dr. Combes mentioned, cardiac deaths and readmissions are down in Pennsylvania. In Pittsburgh, they're down even more than the state average.

One doctor put it this way: "The Cardiac Registry stopped being about who was the worst or the best. It started being about curiosity and learning and saying, 'Hey, how did you do it?'"

Now, PSRS holds out the promise that clinicians will be able to learn even more from one another about hospital-acquired infections and other problems. By recording errors and problems, down to the level of the near miss, these pieces of information previously lost will add pixels to the screen, revealing important patterns that can be acted upon and improved.

The question naturally arises that, if you clearly disclose things gone wrong, aren't you opening yourself up for lawsuits? New reporting systems may begin address this problem, but even as they're being tested we are discovering something unexpected and heartening: it usually pays to do the right thing. More research is proving that when things go wrong, if patients feel like they're being leveled with, apologized and listened to, and if those in positions of authority put systems in place to prevent the same mistake from happening to someone else, lawsuits are minimized.

Several innovative programs involving ombudsman-mediation promise to help resolve disputes more effectively. For example, the National Naval Medical Center Ombudsman-Mediation program has processed about 500 incidents over the last 3 years. Not one has resulted in a claim. On October 21, PRHI is sponsoring a talk by Dr. Lucian Leape, which will be followed by a panel discussion of some of these promising programs.

There's another way we could prejudice the system toward truth-telling. Rethinking the medical malpractice system is more important than the amount of assets it involves (perhaps 2% of direct health care spending). Could we create a real economic incentive under medical liability laws for caregivers to use the learning system? If mistakes are reported to the learning system and the patient within 24 hours of discovery, and prevention measures are installed within a week, payments to the patient could be limited to their economic damages with some basic adjustments for fairness. If an error isn't reported promptly to the patient and the national learning system, the provider could be subject to treble damages.

3. Move problem-solving closer to the point of care. Retrospective data, aggregated over time and discussed in meeting rooms, may be exceptionally useful in defining a problem and placing the starting blocks. It was for the cardiac surgeons.

However, more and more, PRHI partners are discovering just how important it is to get out of the board room and over to the bedside, collecting data in real time and solving problems at the point of care. When Allegheny General Hospital's Dr. Richard Shannon announced his intention to eliminate central line-associated bloodstream infections (CLABs) in two ICUs within 90 days, colleagues silently scoffed. Central lines are placed in the sickest patients, in vessels leading directly to the heart. The lines deliver life-sustaining medication and sometimes nutrition to these vulnerable patients, but occasionally, they inadvertently deliver life-threatening bacteria.

Dr. Shannon asked to be excused from certain hospital meetings so he could spend time on the floor working with nurses and residents. They sought to look beyond retrospective epidemiological data, expressed in metrics like "4.5 infections per 1000 line days." After all, how many people was that? Who were they? What happened to them?

The crew collected data from the prior year by going from chart to chart, understanding which patients had become infected, and what kinds of lines and processes had been used. Instead of narrowing their

definition—a common "trick" used to make the numbers look smaller than they really are—Dr. Shannon's crew broadened the definition to include patients with any line anywhere on their bodies, in search of the whole truth. Their data led them to the shocking and emotional discovery that 50% of the people who contracted CLABs died—a statistic that is borne out nationally every day.

But this single data point, this single truth, called the staff to action in a way that nothing else could. They assembled the collective wisdom already available in their own hospital, infection control practitioners and others, to establish guidelines. The nurses became, in Dr. Shannon's words, "the guardian angels of the central lines."

If a nurse saw a new resident about to violate a guideline, she confronted the situation and if necessary, called for help. More than once, Dr. Shannon was awakened in the middle of the night to dissuade a clinician from doing it the old way. The value in approaching problems in real time comes not only from quick solutions and direct links between practices and outcomes, but in its impact on individual motivation.

Within 90 days, the two ICUs were reporting zero CLABs. In the prior year, 49 CLABs were reported. In the year since real-time problem solving began, only five have been recorded, each linked to a clear violation of protocol, not an inevitable fact of hospitalization or an act of God. Most important, nobody has died from a CLAB since the effort began. (Figure 2)
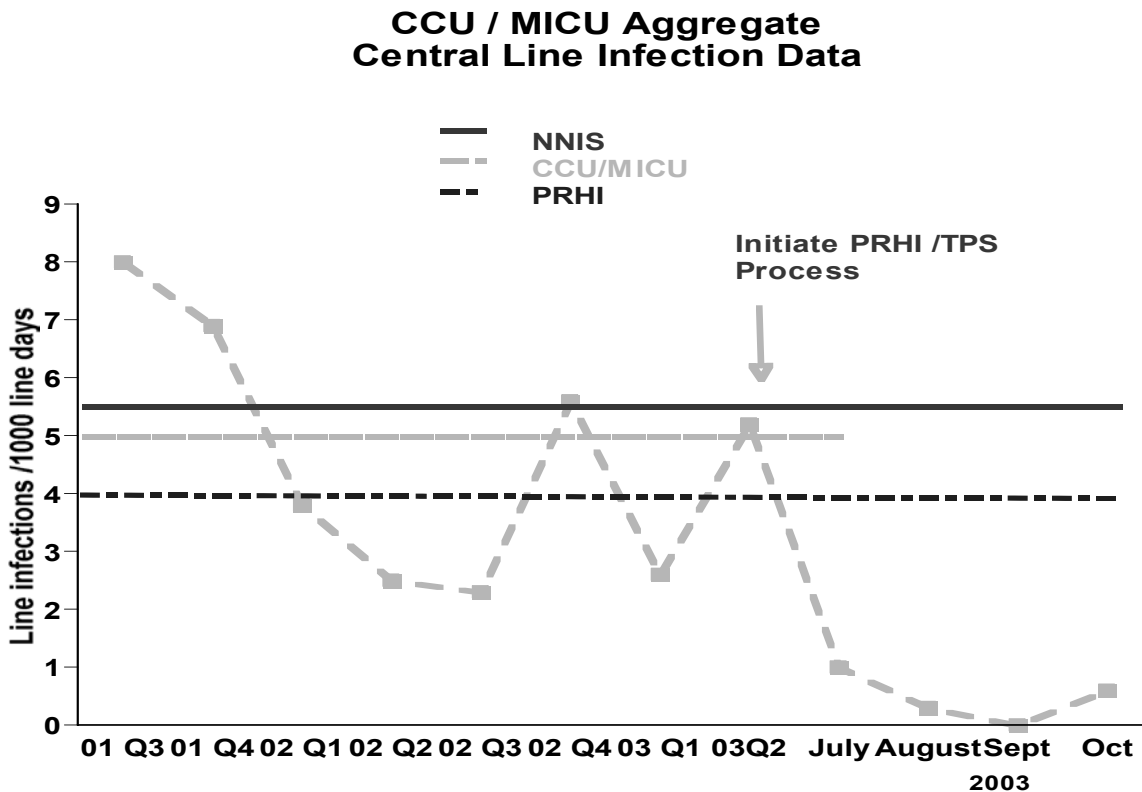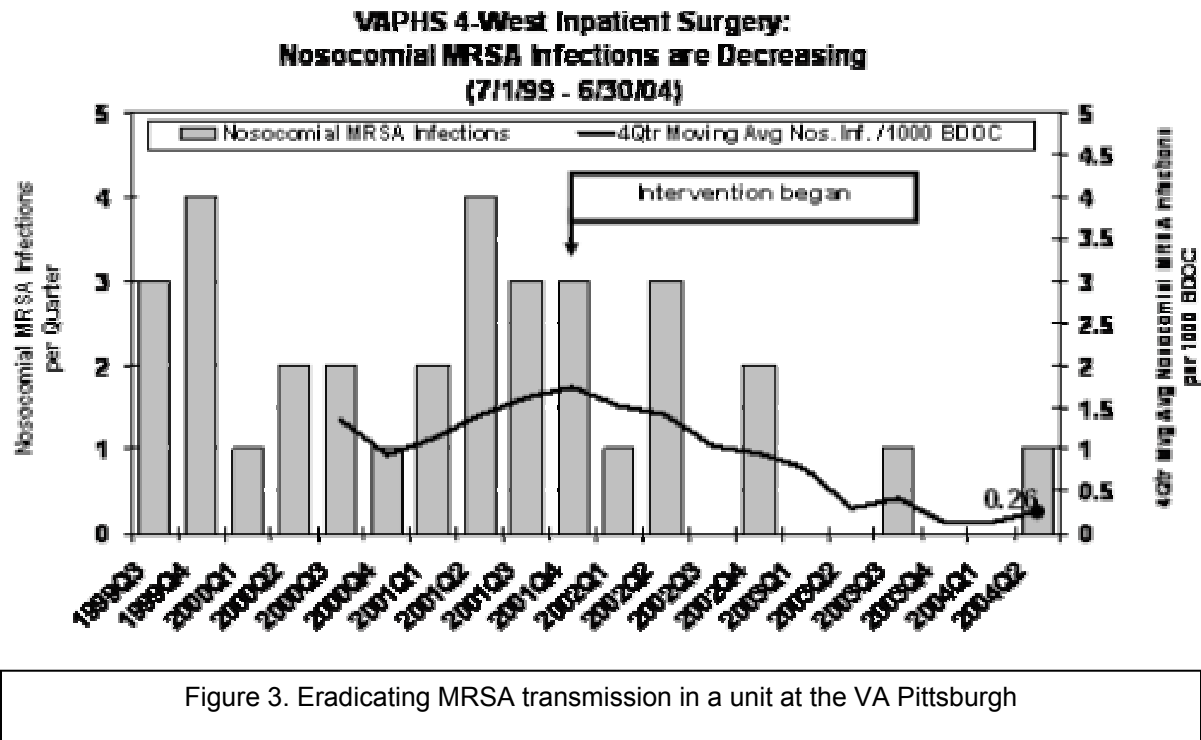

Figure 2. Eradicating CLABs in 90 days

Getting out of the conference rooms and onto the units can have an unforeseeable impact. At the VA Pittsburgh's main hospital, a post-surgical unit has been Ground Zero for a joint venture among the VA, CDC, and PRHI for the elimination of antibiotic-resistant infections, MRSA. PRHI staff member, Peter Perreiah, and VA nurse Ellesha McCray have been working on the problem with workers at the point of care for over two years. Initially they attacked the obvious problem that hand hygiene supplies were not always at the ready. Eventually, staff came to trust the system, knowing that gloves, gowns and hand sanitizer would always be there. Rates of infection and colonization began to fall (Figure 3).

VAPHS 4-West Inpatient Surgery: Nosocomial MRSA Infections are Decreasing (7/1/99 - 6/30/04)

Figure 3. Eradicating MRSA transmission in a unit at the VA Pittsburgh

The patient care unit, the very point of care, is where the frayed ends are. Pick a thread and pull it, and you are likely to unravel a system problem to solve. We need to expose the frayed ends.

In January, colleagues at Connemaugh Medical Center were asked to pilot the new JCAHO evaluation process, called the Tracer Patient method. Instead of announcing an inspection in advance, JCAHO inspectors come unannounced and follow the experience of a single patient all the way through their hospitalization. Instead of merely "inspecting," JCAHO evaluators tug on frayed ends, helping leaders identify new things to learn. PRHI endorses the philosophy of viewing the entire healthcare enterprise from the patient's point of view. In fact, so impressed were Connemaugh's leaders with what they learned that improvement groups now follow a tracer patient every day.

4. Understand costs. Dr. Shannon's work at Allegheny General makes a clear business case for the elimination of CLABs. Because 44 people did not become infected in the last year, the hospital has saved an average of $30,277 in variable costs per person. That is, when two ICUs in one hospital eliminated one class of infection, the hospital saved $1.33 million. The CDC conservatively estimates that over 80,000 CLABs occur in ICUs annually, which may translate into at least $2 billion. How much money could be saved if all hospital-acquired infections were wiped out?

Dr. Shannon's team at Allegheny General is uncovering other even more substantial collateral savings that accrue when patients do not contract hospital-acquired infections. The research seems to expose as urban legend the notion that patients with complications always bring in higher reimbursements and hence, profit. By digging in to what things actually cost, the Allegheny General team is proving that the cost of treating hospital-acquired infections almost always exceeds even the most generous reimbursement. Conversely, profits accrue, albeit sometimes very small profits, when a normal course of treatment is administered and the patient stays infection-free.

Again, drawing from industry, it should come as no surprise that it costs less to get it right the first time. And again, quality is the key to improvement—even in the bottom line.

Why does it take a team of accountants to uncover the real cost of treating an infection? Why don't hospitals know how much things cost? Health care may be the only industry that keeps two sets of books as a matter of course. Bills sent out by hospitals are a fiction. Because of their contracts, insurers pay only a fraction of the listed price. But if you don't have insurance, foot the whole bill. In Pennsylvania last year, hospitals were reimbursed 30 cents for every dollar they "billed" – the rate of reimbursement they expected. In addition to raising obvious issues of equity, asking employees to work in an organization where a major facet of the work is fiction has a corrosive effect on the enterprise.

How can state government help?

1. Let's put our Commonwealth out front in the national healthcare conversation.

At PRHI, we usually pose our most audacious ideas as questions beginning with *"Why can't we…?"* It's an important deviation from the blaming question, *"Why don't we?"* Asking *"Why can't we"* helps us identify barriers, so they can be removed. Using this technique, let me pose these questions:

- *Why can't* Pennsylvania be the first state in the union to provide all of its citizens with basic health coverage, with every citizen bearing the responsibility of paying for it, according to his or her means?
- *Why can't* state government call to eliminate all hospital-acquired infections across the Commonwealth, starting with the elimination of CLABs within the next 90 days? Inspired by Dr. Shannon's work, 10 hospital systems in Minneapolis have called for it and have begun doing it.
- *Why can't* we halt to the spread of MRSA in Pennsylvania within the next 12 months, using the techniques in use at the VA Pittsburgh and also in several European countries?

If every hospital in the Commonwealth eradicated only these two kinds of infection, they would be well on their way to creating vigorous learning systems, and saving lives and untold millions in the process.

2. Let's put our money on the table.

Hospitals should do better than break-even when they get treatment right the first time. While the idea of "pay for performance" is beginning to catch on, current quality incentive programs typically involve less than 1% of annual revenue for a hospital, when hospital CEOs will tell you that at least 5% would be required to "get their attention." *Why can't we* immediately and radically expand the scale and scope of pay for quality efforts?

Let's not forget that today chronic disease accounts for 75% of all health care. *Why can't we* shift payment incentives toward the cheap, effective primary care that can help stay the progression of more serious diseases? Over the past 5 years, the Veteran's Administration has done so, and the result is this: their per-patient costs have stayed steady, while the rest of American healthcare increased 50%; and a

recent study confirmed that the VA is providing the nation's highest quality primary care. In Pittsburgh, foot amputations among diabetics have declined by 38%. *Why can't* Pennsylvania follow the VA's lead?

3. Let's reduce and coordinate reporting requirements.

Here is an abbreviated list of the surveys and reporting requirements of the average Pennsylvania hospital CEO (Figure 5). Daunting, isn't it?

- *Why can't we* unify the reporting of medical errors and infections among the Patient Safety Authority, PHC4 and any other state body, making the information simple for hospitals to capture and act on?
- *Why can't we* radically reduce the number of surveys, and coordinate and modernize the approaches for the necessary ones?

Again I thank you for the opportunity to address the HEART health care task force today. Sharing ideas with you and with this illustrious panel is a valuable privilege. The good news about health care is this: the opportunity to act has never been better. The opportunity to make statewide improvement has never been greater. Thank you.

Figure 4. Typical Reporting Requirements

Entity/Agency	Entity/Agency Role	Data Reported	Reason for Reporting	Frequency	Comment
American Hospital Association	Partnering w/CMS, JCAHO to develop uniform approach to collecting hospital performance data and sharing that information w/public	10 initial process data elements: heart attacks, heart failure, CA pneumonia	Voluntary, but CMS has tied full 2005 payment update to participation	Quarterly	Measures considered clinically valid; strongly associated w/better outcomes
Center for Medicare & Medicaid Services (CMS)	See above	See above	See above	See above	
Joint Commission on Accreditation of Healthcare Organizations (JCAHO)	Accreditation for hospitals; provides hospitals "deemed" status for CMS. Also part of AHA/CMS partnership Sentinel Events	Core measures (Initially hospitals could select among broad set of measures and systems. Increasingly congruent w/AMA, CMS partnership. Errors, near misses as defined by JCAHO	Required for accreditation	Quarterly	Most hospitals in PA use Mediqual system to report JCAHO core measures JCAHO sentinel event reporting requirements have shaped how many hospitals approach error reporting
Quality Insights of PA (QIP)	Contracted by CMS for PA to assist in quality improvement. Implements CMS national initiative to improve care across continuum	Clinical: AMI, CHF, CA Pneumonia, surgical infections Some utilization/billing issues	Collaboration required as a Medicare provider	Varies by area, audit request	
Pennsylvania Health Care Cost Containment Council (PHC4)	Monitors and reports quality and cost indicators of health care services provided in PA hospitals	Key clinical data elements (drawn from chart review and billing codes) from inpatients cv. LOS, mortality rates, complication rates, readmission rates, patient safety indicators, and hospital charges. Submitted via Mediqual system (required)	Required by State Law	Quarterly	Reauthorization required reducing reporting to less than 50% of charts. Most hospitals use Mediqual system to meet JCAHO/AHA/CMS reporting as well. New infection reporting requirement to focus initially on four major categories of infection. Overlap w/PSA, PRHI

Entity/Agency	Entity/Agency Role	Data Reported	Reason for Reporting	Frequency	Comment
Commercial Insurers	Insurance companies' traditional quality monitoring and pay for performance pilots	Assurance activity varies by plan. Most look at same population as CMS. Pay for quality pilots use process and outcome measures in select areas.	Assurance activity is a contractual requirement. Pay for quality programs tie small part of revenue to attaining quality targets	Varies by plan	Only a few plans have pilot pay for quality efforts. Financial stakes modest to date.
Leapfrog Group	Public reporting to measure compliance with specific safe practices	3 quality measures initially; expanding to 30	Voluntary, encouraged by purchasers	Annual survey	
Pittsburgh Regional Healthcare Initiative	Regional collaborative to improve performance of the health care system	CLABS (ICU/MRSA), MRSA VAP, MRSA operative wounds (hips, knees, sternums), medication errors (via Med Marx), cardiac surgery data	Shared learning	Varies	(Other PRHI clinical information derived via HC4 data set – no additional collection burden on hospitals)
PA Department of Health (DOH)	State licensing agency	Serious events, elopements, fall/med errors resulting in injuries, patient injury or accident, infrastructure failures, EMTALA issues	Required by PA Chapter 51 and Medical Care Availability & Reduction of Error Act (Act 13)	Within 24 hours of event	All to be reported to Patient Safety Authority (PSA). PSA passes information on required events to DOH. Hospitals mistrust DOH re: punishment for error reporting.
Patient Safety Authority	Independent PA agency charged by M-Care Act to help reduce medical errors in PA	Serious events and incidents Technically includes healthcare-acquired infections and all unsafe conditions	Required by M-Care Act (Act 13)	24 hr of serious event; monthly for incidents. Info passed to DOH	Program being trailed at 20 hospitals. Alerts and safety bulletins being sent to hospitals, but not open at this point to decentralized entry or allowing open access to database for learning.
FDA	Federal agency	Events where patient death/injury may have been caused or contributed to by a medical device	Required by Safe Medical Device Act	Within 10 days of event	

Typical Survey Requirements					
Entity/Agency	Entity/Agency Role	Data Reported	Frequency	No. of days	Comment
JCAHO	Hospital Accreditation	Inpatient and outpatient areas	Every 3 years	5	JCAHO has announced that all surveys will be unannounced beginning in 2006
JCAHO	Home care accreditation	Home care	Every 3 years	3	JCAHO has announced intention to have all surveys occur at same time
PA Department of Health; Division of Acute and Ambulatory Care	State license	Inpatient and ambulatory areas	Every 3 years	5	
"	State license	Home care licensing for state AND Medicare home health participation	Every 3 years	4	None of various PA DOH surveys occur on same days
"	Inpatient Psychiatry	Inpatient psychiatry	Every year	1	"
PA Department of Health; Division of Emergency Medical Services	State licensing	Certain emergency medical services	Every 3 years	1	"
PA Department of Health	Life safety inspection	Inpatient / ambulatory areas	Every 2 years	5	"
PA Department of Health; Bureau of Laboratories	State and Clinical Lab Improvement Amendment licenses	Pathology / labs	Every 2 years	1	"
PA Department of Public Welfare (DPW)	State licensing	Outpatient Psychiatry	Every 2 years	1	Not at same time as partial psych survey
PA DPW	State licensing	Partial hospitalization program (psych)	Every 2 years	1	Not at same time as outpatient psych survey

PA Department of Environmental Resources (DER)	State licensing of radioactive materials and x-ray equipment	Nuclear medicine & parts of cardiology and radiology depts	Every 2 years	3	Not coordinated w/other State surveys
Allegheny County Health Department	Infectious Disease Review	Charts: Reporting of infectious disease	1-2 times per year	1	
Allegheny County Health Department	Food Safety Inspection	Main kitchen and cafeteria	Every year	1	
Allegheny County Health Department	Food Safety Inspection	Gift shop	Every year	1	Not same date as ACHD review of main kitchen & cafeteria
Environmental Protection Agency (EPA) for the Food & Drug Administration (FDA)	Mammography regulations	Mammography imaging areas	Every year	1	Separate survey dates for each site where mammography performed
Food and Drug Administration (FDA)	Federal license	Blood bank	Unannounced, at least every 2 years	1	Note that this survey is unannounced.
Health Resources & Service Administration (HRSA)	Progress of federal grants	Various	Every 2 years	1	
Commission on Accreditation of Transport Services (CAMTS)	Program accreditation	Certain emergency services	Every 3 years	2	
Accreditation Council for Continuing Medical Education (ACGME)	CME accreditation/ institutional review	Whole institution	Every 4 years	1	
Accreditation Council for Continuing Medical Education (ACGME)	Accreditation	Certain services	Every 5 years	1	
American Board of Internal Medicine	Certification of house staff evaluations	Various programs	Every 5 years	1	
American Association of Blood Banks	Accreditation	Blood Bank	Every 2 years	2	Not same date as FDA review of blood bank
American Institute of Ultrasound in Medicine	Certification for ultrasound units	No on-site survey; just documentation submission	Every 3 years	N/A	

College of American Pathologists	Accreditation	Pathology & certain labs	Every 2 years	1	
College of American Pathologists	Accreditation	Blood gas lab	Every 2 years	1	Occurs w/in 2 weeks of pathology review
PA Trauma Systems Foundation	Accreditation	Trauma	Every 3 years	1	
Residency Review Committee for Internal Medicine	Accreditation	Various programs	Every 18 months (approx.)	3-5	
Workers' Comp insurance carrier	Safety issues / contractual	Inpatient and ambulatory		No set schedule	