PRHI Executive Summary

The collective conversation

Could patient-controlled analgesia be safer?

In one groundbreaking session May 14, PRHI's Medication Safety Advisory Group convened healthcare professionals from 28 hospitals to discuss the use of patient-controlled analgesia (PCA) pumps, and the medications they deliver.

Co-chairing the Advisory Group is Robert J. Weber, RPh, MS, Executive Director of Pharmacy for UPMC and Department Chair, University of Pittsburgh School of Pharmacy. He kicked off the session with some striking facts garnered from 2002 national and regional MedMARx data. The regional data came from 33 of the region's 37 hospitals.

But how would 95 pain management experts "discuss" the findings, let alone reach consensus on recommended practices for eliminating PCA-related errors?

With help from a state-of-the-art electronic audience response system, the group held a vigorous, wide-ranging discussion and reached consensus on 25 of the 26 recommended regional practices. And they did it all in one meeting.

Just the facts

Nationally, narcotics used for pain management account for 13.4% of the serious (E through I) errors reported in the MedMARx system: in Southwestern Pennsylvania, the rate is 20.5%. Other local PCA-related findings:

- ✧ Narcotics account for 20% of serious PCA-related errors (those capable of actual patient harm).
- ✧ Morphine is involved over 80% of the time.

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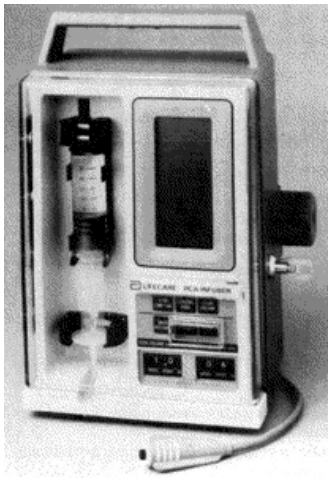


The PRHI summit focused on patient controlled analgesia pumps and the medications they deliver. Over 90 pain management experts discussed how to improve PCA's safety and efficacy for patients.

JUNE 2003

Inside this issue:

Third Regional Cardiac Forum

PRHI Cardiac Registry echoes NNE findings

Q: *What could entice over 40 busy cardiac clinicians to give up a precious Saturday morning?*

A: PRHI's third Cardiac Forum, held at UPMC Passavant on April 26, where they shared the first round of regional data collected through the PRHI Cardiac Care Improvement Registry.

Q: *What's so exciting about data?*

A: The information will lead to improved care for every patient in the region who undergoes coronary artery bypass graft (CABG) surgery. The Registry represents the culmination of three years' work among a wide-ranging group of the region's cardiac practitioners, and others interested in healthcare improvement.

Q: *What did people learn at the Cardiac Forum?*

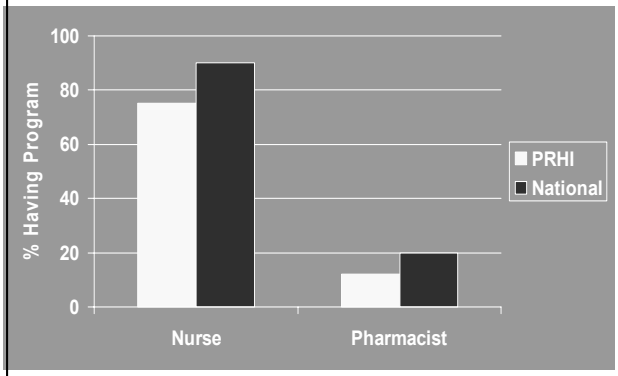
A: They learned that PRHI's initial findings, based on data from nine of the region's 13 cardiac surgery centers, echoed those of the Northern New England Cardiovascular Disease Study Group (NNE), which helped PRHI in creating this Registry. They confirm the value of four simple steps in reducing mortality from CABG surgery:

- ✧ **Encourage pre-operative aspirin use**
- ✧ **Adequately control heart rate,**

Continued, page 4

Could patient-controlled analgesia be safer? — from page 1

Who completes a PCA Competency Program?



Opportunity for improvement: Nationally and locally, more nurses than pharmacists complete specific training in PCA competency. This was one of several findings presented at the PCA conference that showed the way for regional improvement.

- ✧ Mix-ups between the drugs morphine and meperidine cause at least 50% of reported errors.
- ✧ Causes include incorrect use of PCA pumps, mistakes in dosing and use; and product mix- ups.

The following conclusions flowed from the data:

- ✧ Safety can be improved by eliminating meperidine PCA; standardizing morphine concentration; and increasing familiarity with hydromorphone.
- ✧ Consensus must be nursing driven.

Sue Skledar, RPh, MPH, of the University of Pittsburgh School of Pharmacy, presented information gathered from a regional and national PCA survey that highlighted several opportunities for the Pittsburgh region to improve its policies and practices around patient controlled analgesia.

The remainder of the conference was devoted to discussing and voting on 26 recommended practices and policies. Colleen Dunwoody, RN, MS, led this group of 95 experts as they discussed and voted on which practices would result in the "safest possible patient environment."

Over the summer, PRHI plans to work with participating hospitals to collect additional data around PCA related errors and to provide tools for the Medication Safety Regional Working Group members to use during implementation.

In November 2003, the next PCA conference will:

- ✧ Examine the status of recommended PCA practices in our region.
- ✧ Relate that information to MedMARx data.
- ✧ Expand the conversation to PCA pump manufacturers and human factors engineers.
- ✧ Examine ways to incorporate patient safety practices into medical, nursing and pharmaceutical education programs.

FOR FURTHER INFORMATION

If you would like further information regarding :

- ✧ PRHI's November 2003 PCA Conference
- ✧ Full copy of practices agreed to by consensus
- ✧ Ways to get involved with the Medication Safety Advisory Committee or Regional Working Group

Please contact Stacie Amorose, PRHI Medication Safety Specialist: 412-535-0292 x106; samorose@prhi.org.

SYNOPSIS: 25 PCA SAFE PRACTICE GUIDELINES

Conference attendees discussed and voted to adopt guidelines in the following general areas.

Area	Topic	Number of guidelines accepted
Safe Prescribing and Monitoring	Standard order forms, drug choice, and standard concentration	9
Safe Dispensing	Pharmacist review, drug storage and proper labeling	5
Safe Administration	Medication administration records, pump programming, and proper tubing	5
Patient-specific Safety Measures	Education, pendant buttons, patient use and PCA by proxy	5
Healthcare Professional Education	Continuing education and competency	1

PRHI Scorecard 2003

Hospitals continue to state 2003 goals

PRHI's overall goal remains zero nosocomial infections, zero medication errors and the world's best outcomes in five clinical areas. On the way to the goal, PRHI is challenging partners this year to:

- ➔ Eliminate CLABs in ICU's; reduce CLABs outside ICUs, MRSA, others by 50%.
- ➔ Report all errors and eliminate 50% of them.
- ➔ Reduce in-hospital mortality following CABG surgery by 50%.
- ➔ Share every major event or learning regionally as soon as possible.

Last month's newsletter detailed commitments from several local hospitals and health systems. This month, responses have continued. Stating goals publicly is an important first step toward regional learning and improvement.

Responses received in May

West Penn Allegheny Health System (supplemental to system response previously published)

Allegheny General Hospital

Connie M. Cibrone, President and CEO

- ♦ No patient who comes to us for care will suffer a medication error
- ♦ No patient who comes to us for care will contract a hospital-acquired infection
- ♦ No patient who comes to us for care will suffer in-hospital mortality following coronary artery bypass graft surgery

A detailed outline and plan accompanied this response.

Alle-Kiski Medical Center

West Penn Allegheny Health System
Michael Harlovic, Director of Nursing

- ♦ Zero insulin medication errors.
- ♦ Reduce class one surgical site infections by 50%.
- ♦ Zero CLABs in the ICU.

Canonsburg General Hospital

West Penn Allegheny Health System
Barbara A. Bensaia, President and CEO

- ♦ Maintain zero central-line associated bloodstream infections (CLABs) for FY 2003
- ♦ Continue participation in PRHI advisory committees and in-house committees
- ♦ Double the number of medication error reports

Forbes Regional Hospital

Thomas J. Senker, FACHE, President and CEO

- ♦ Reduce CLABs in ICU by 50% in 12 months. Developing standardized central line pack to optimize sterility during line placement.
- ♦ Reduce order entry medication errors by 30%, aided by order legibility initiative.

Heritage Valley Health System

Norman F. Mitry, President and CEO
Daniel H. Brooks, MD, Vice President and CMO

- ♦ Zero CLABs. Continuing education on insertion guidelines; advocating for lesser-risk techniques
- ♦ Develop non-punitive reporting climate; increase error reporting to nationally expected rates of 19% of doses administered. All E through I errors subject to 6 sigma root cause analysis. A through D errors reviewed by committee at each campus. Monthly med error prevention program completed for each clinical unit. All 39 dangerous abbreviations eliminated.
- ♦ Among additional HVHS 2004 Goals:
  - ✧ Achieve 100% for: proper use of restraints; surgical site identification; depression post-discharge follow-up at 7 and 30 days
  - ✧ Exceed national standards for surgical site infection
  - ✧ Meet or exceed PRHI Cardiac Surgery Registry goals

"PRHI is *your* initiative. You are all committed to great patient outcomes. We are just here to help provide a bridge to share information so we can learn for each other more quickly.

We view our role as that of facilitator. We know something about techniques of improving systems in a conscious, continuous determined way, and we are here to help you.

But this is really all about you. Without you and without your energy and determination, there is no initiative.

If you view us as a regulatory burden that you have to do for some non-valuable reason, call me up.

I view this collaboration as extremely important, in terms of having a great potential to make a contribution to the condition of life and expectations for life in the United States."

—PAUL O'NEILL, CHAIR, PRHI LEADERSHIP OBLIGATION GROUP STATEMENT TO PRHI LEADERS, JUNE 5, 2003

PRHI Cardiac Registry echoes NNE findings— from page 1

through use of beta blockade

- **Use left internal mammary artery, when available**
- **Avoid hemodilution while patient is on heart bypass pump**

How did the Registry get started?

In 2000, PRHI's Pennsylvania Healthcare Cost Containment Council (PHC4) Cardiac Outcomes Report showed, through data, that cardiac care in our region could improve. PRHI's Cardiac Working Group, co-led by cardiologists and cardiac surgeons, and including registered nurses, data analysts and others from the region's 13 cardiac surgery centers, took up the challenge. Together over the next two years, they designed the PRHI Cardiac Care Improvement Registry, which tracks each patient's outcome following coronary artery bypass graft (CABG) surgery. For professionals, the registry becomes a learning system.

Did the Working Group have help?

PRHI's effort is modeled after NNE, a consortium of clinicians, scientists and hospital administrators from five hospitals in three New England states. Their impressive results include a 24% reduction in hospital mortality for cardiac surgery within 18 months of implementing their common registry and shared learning.

PRHI and NNE data suggest four steps toward safer CABG:

- **Pre-operative aspirin**
- **Adequate beta blockade**
- **Left internal mammary artery**
- **Maintain hematocrit while patient is on heart bypass pump**

FOR FURTHER INFORMATION

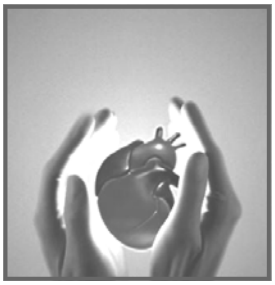
If you would like further information regarding:

- Ways to get involved with the PRHI Cardiac Working Group
- Information on the next Cardiac Forum

Please contact Dr. Dennis Schilling, PRHI Clinical Coordinator: 412-535-0292 x116; dschilling@prhi.org.

How does PRHI's Cardiac Registry work?

To date, the Cardiac Working Group has selected 89 data elements focusing on atrial fibrillation and mortality. Sound like a lot of extra work? Actually, the coordinated regional effort represents a net decrease in data collection for participating cardiac surgery programs and hospitals, which have been collecting broad, overlapping data sets.



In addition to the Registry, PRHI's cardiac project includes:

- Information dissemination about care processes associated with superior outcomes in focus areas.
- Thrice yearly Cardiac Forums, regional seminars for the cardiac community and other stakeholders to share and consider findings "face to face."
- Site visits to member institutions for participants to study promising processes of care.

What does PRHI hope the Registry will achieve?

The April 26 Cardiac Forum presented Registry data from nine pilot hospitals. Twelve hospitals providing CABG surgery in southwestern Pennsylvania have committed to participate, and plans call to expand to all 13 sites. Learning together over the next several months, the Cardiac Working Group hopes to see the following improvements across the entire region:

- Measurable reductions in post operative atrial fibrillation – an irregular heart rhythm
- Measurable reductions in mortality, achieved by adopting the four measures recommended by NNE.

More, next page →

Condition C at UPMC McKeesport

Leaders to staffers: "*Thank you for calling for help*"

A nurse notices that a patient's condition is deteriorating, just a little at first, then a little more. Should he call a *Condition* C for urgent help, summoning an emergency team to intervene? What if the patient continues in distress? On the other hand, what if the team responds and the call is deemed a "waste of time?"

During clinical root cause analysis, a physician, nurse and administrative leaders at UPMC McKeesport discovered that nurses may be reluctant to call for help. This reluctance, common in most hospitals, occasionally caused patients to endure needless suffering, even death.

The problem confronting the team required a cultural change in the institution, making it "safe" to call for help early. That's a tall order. Borrowing on ideas developed by UPMC Presbyterian physicians Michael DeVita and Richard Simmons, the leadership team used creative ways to implement a new code plan.

Changing the culture to allow early calls for help required engaging staff intellectually, emotionally and professionally. Beginning in 2000, the pioneers at McKeesport worked toward their goal on a number of fronts:

- Through personalized learning packets that include data, case studies and humor, learning leaders taught hospital staff about the importance of calling for help using the new *Condition C Plan*. The plan laid out specific clinical parameters. The packet states, "When you call this [Code C] emergency, everyone arrives and it is determined how the problem can be rectified. Thus you have achieved the ultimate purpose of the plan. It was not a wasted call or time wasted."
- To reinforce the learning, senior nursing leaders responded every time a Code C was called. They thanked the nurse for calling the code, reviewed the situation, and ensured that each call for help was treated with complete respect.

Initially, the number of Code Cs remained at around 8 per month. But as the staff saw first-hand the plan's effectiveness, calls increased to about 30 per month. The rise corresponded with an increase in survival for patients.

Now that staff are comfortable calling Condition C, senior nursing leaders have begun responding to "physician stat" emergency calls, which summon one physician. They seek to learn whether these calls might be better handled as Condition Cs, summoning a team.

UPMC McKeesport's Condition C program was recently recognized by Joint Commission Resources as a "field best practice". At JCR's request, UPMC McKeesport leaders have presented the concepts of Condition C and tools for rapid culture change nationally.

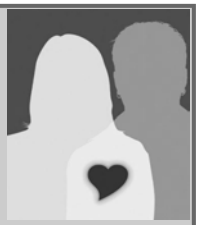
FOR FURTHER INFORMATION

"Condition C" learning packets will be available at PRHI's Infection Control and Medication Safety Advisory Committee meetings. Call Heidi Norman, 412-647-0672. For further information on the program, contact UPMC McKeesport staffers:

- Ms. Cheryl Como, SVP Patient Services
- Ms. Doris Gaudy, Director, Nursing
- T. Michael White, MD, SVP Value and Education

412-664-2000

Cardiac Forum, April 26, 2003



Presenters

Bradley Taylor, MD – UPMC Passavant Hospital, Cardiothoracic Surgeon
George Magovern, MD - Allegheny General Hospital., Cardiothoracic Surgeon
Michael Culig, MD - Western Pennsylvania Hospital, Cardiothoracic Surgeon
Tom Smitherman, MD - UPMC Presbyterian Hospital, Cardiologist
Lawrence Wei, MD - UPMC Presbyterian Hospital, Cardiothoracic Surgeon
Rick Shannon, MD - Allegheny General Hospital, Cardiologist
Dennis Schilling, PharmD – Clinical Coordinator, PRHI

Administrative Leaders

Geoff Webster, MPA - Associate Director for Clinical Initiatives, PRHI
Jon Lloyd, MD - PRHI Medical Advisor
Vickie Pisowicz, PRHI Operations Team Leader
Helen Adamasko, PRHI Business Manager
Lisa Beckwith, PRHI Perfecting Patient Care Team Leader
Diane Frndak, PRHI Perfecting Patient Care Team Leader

Part 2: Fixing a system problem

Clean wheelchairs every time

Vickie Pisowicz
412-535-0292, ext. 113
vpisowicz@prhi.org

Why can't we provide clean wheelchairs for patients when and where they need them.?

Answering that seemingly basic question meant tackling—and solving—a thorny system problem at the Veteran's Administration Pittsburgh Healthcare System (VAPHS), a problem encountered in hospitals everywhere.

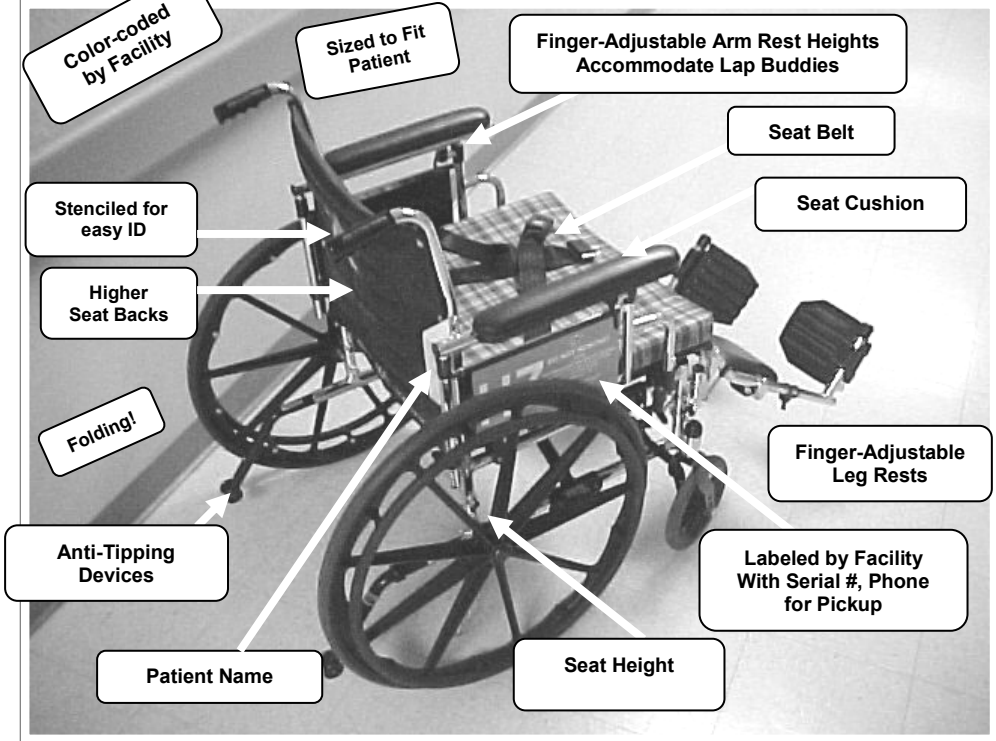
"Hospital staff used to spend a lot of time looking for wheelchairs," says Peter Perreiah, PRHI Team Leader at the VAPHS Learning Line on 4 West, "We had to do both: get the right wheelchairs available for patients, and free up the staff to focus on patient care instead of hunting for wheelchairs."

The quest to provide wheelchairs as needed, in specific configurations for different patients, led the problem-solving team on a year-long odyssey through all three VA locations: the acute care hospital on University Drive; the H.J. Heinz long-term care facility; and the Highland Drive psychiatric facility.* "Finding" wheelchairs meant finding time—-a precious commodity for busy healthcare workers.

Experiment: borrow a cart washer

Presenting clean wheelchairs to staff and patients is important. The group hit upon the idea of using a cart washer in another area of the hospital to clean the wheelchairs thoroughly. The cart washers, enclosed units similar to dishwashers, use high-pressure hot water to "detail" the chairs. During off hours, the wheelchairs were processed one by one, and in 12 days, the whole fleet had been washed.

The effect was dazzling—wheelchairs that looked brand new.



The VA's investment in new wheelchairs stabilized a chronic system shortage. The new chairs are color-coded by facility. The diagram above shows the special, patient–centered features of the most intensively used wheelchairs in the system, those at the Heinz long-term care facility. Patients at Heinz "live" in their wheelchairs every day, necessitating frequent cleaning.

Experiment: try a portable cart washer

Borrowing washers from another unit wasn't viewed as a long-term solution. It was daunting to trek a hundred-plus wheelchairs to one place in the hospital. Instead, the team tried a portable cart washing unit capable of turning out a clean wheelchair every four minutes. A portable washer could be moved *to the wheelchairs*, instead of vice versa.

In the end, only two portable cart washers were needed to service the entire wheelchair fleet. One is housed at the main University Drive hospital; the other is at the Heinz long-term care facility.

In some units, plumbing was readily available. In others, a simple plumbing retrofit met the need. The procedure began to work: the group called ahead of time, giving the unit advance notice that the cart washer would be available on-site. Two-person teams did the work, with one retrieving chairs and one monitoring the wash cycle.

At University Drive, the group quickly discovered that the optimal time for

*Solving the supply problem was discussed in Part 1 (May 2003, *PRHI Executive Summary*).

**The VAPHS Learning Line is run in conjunction with the Centers for Disease Control and Prevention (CDC)*

cleaning the chairs was during the evenings, when the clinics were closed, there were fewer calls for wheelchairs, and the hospital was less congested.

Washing on schedule; washing on demand

Within several days of the cart washer's arrival, each of the over 200 wheelchairs at the Heinz long-term care facility was cleaned. Residents at the facility spend most of their days in the wheelchairs, so frequent cleaning and maintenance is a must for patients' comfort and wellbeing.

The housekeeping staff at Heinz established a monthly schedule for washing and inspecting every wheelchair. As it turns out, the chairs are staying clean longer than expected at Heinz, and the staff is adjusting the regular cleaning schedule.

The housekeeping staff also formalized procedures for urgent need. When a wheelchair needed immediate attention, the housekeeping staff comes promptly to clean it.

Staff at each hospital have now developed cleaning patterns based on patient usage. For example, at Heinz, where long-term care patients virtually "live" in their wheelchairs for hours each day, cleaning is more frequent. At University Drive, the cleaning schedule accommodates acute care patients who use wheelchairs intermittently for transport between units.

Creating value

Keeping the safety and comfort of patients in the forefront creates value in several ways. Not only are patients more comfortable, they arrive at appointments on time in clean equipment. Workers recover time that had been spent looking for and waiting for wheelchairs. Freeing up time for patient care adds meaning to their work, and adds value for every patient. Workers report satisfaction with this new system, and continue giving their input to fine-tune it.

"Honorable mention"

Various aspects of PRHI have been cited in books, magazines and reports over the past few months. Here is a current list.

Governor Rendell's Plan for Medical Malpractice Liability Reform, *June 9, 2003, http://www.governor.state.pa.us*

Saving Lives & Saving Money, by Newt Gingrich. In his just-released book, Gingrich cites PRHI as one example that "offers both proof that a better system of health and healthcare is possible and an opportunity for others to adopt the transforming examples." Available at *www.healthtransformation.net*.

HealthLeaders Magazine

June 2003: **Depression Initiative in Pittsburgh,** by Paula DeWitt
http://healthleaders.com

Pittsburgh Business Times

May 23 [front page]: **Heart Tact: Cardiac care registry seeks best practices for bypass surgery**, by Lynne Glover *http://pittsburgh.bizjournals.com/pittsburgh/stories/2003/05/26/story4.html*

May 9: **Rosemarie Greco's task: Solve Pa. health care, heads new Office of Health Care Reform**, by Lynne Glover
http://pittsburgh.bizjournals.com/pittsburgh/stories/2003/05/12/story4.html

May 5 – 9: **OnQ Magazine** (WQED) week-long series on depression, featured interview with Clifford Shannon, PRHI Buying Healthcare Value Committee Chair, on the necessity of treating workers' depression, and PRHI's efforts. (*www.wqed.org*)

Physicians News Digest

April edition: **Report Card for the PA Health Department**, profile of Karen Wolk Feinstein, by Chris Guadagnino
www.physiciansnews.com/spotlight/403.htm

Pittsburgh Post-Gazette

April 27, 2003: **Dear Doctors: We need help**, by Karen Wolk Feinstein
www.post-gazette.com/forum/comm/20030427edfein27p2.asp

U.S. Senate Committee on Appropriations, Subcommittee on Labor, Health and Human Services and Education

March 13: Statement by Claude A. Allen, Deputy Secretary; Department of Health and Human Services on **Addressing the New Health Care Crisis: Reforming the Medical Litigation System to Improve the Quality of Health Care**
www.hhs.gov/asl/testify/t030313.htm

Calendar, July 2003

Monday, July 7	Depression/Diabetes Work Groups) Centre City Tower, 5th Floor, Montour Room.	5-7 p.m.
Tuesday, July 8	Medication Administration Advisory Committee – 3-5 p.m. PRHI Offices	
Thursday, July 17	Buying Healthcare Value Committee – 2:30 – PRHI Offices	4 p.m.
Wednesday, July 23	Board of Directors meeting– Board Room, Allegheny General Hospital	4 p.m.
Wednesday, July 30	Chronic Care Summit (Diabetes and Depression) Allegheny Health Choices, Gateway 2 Building	4—8 pm

For further information call Helen Adamasko, 412-535-0292, ext. 100

Contact Us

Phone: 412-535-0292
Fax: 412-535-0295

Ken Segel, PRHI Director
412-535-0292, ext. 104
ksegel@prhi.org

PRHI Executive Summary is also posted monthly at **www.prhi.org**
Please direct newsletter inquiries to:
Naida Grunden,
Director of Communications
412-535-0292, ext. 114
ngrunden@prhi.org

Pittsburgh Regional Healthcare Initiative

650 Smithfield Street, Suite 2150
Pittsburgh, PA 15222

ON THE WEB AT
WWW.PRHI.ORG