February/March 2006

PRHI Executive Summary

Pittsburgh Regional Healthcare Initiative

Chronic Disease: the 45% solution

Primary care physician John Schmidt is about to see Amber Johnson, a long-time patient of his. Ms. Johnson has diabetes, and almost always remembers to come in for her quarterly check-ups. Today, Dr. Schmidt is confounded. He knows Ms. Johnson had her blood drawn for the hemoglobin A1C test, a standard for diabetics. Yet as he rifles

PRHI Chronic Disease Forum 2: Electronic Medical Records and Chronic Disease

Registration—see Page 7

through the hundred-and-one papers in her file, he cannot find the lab results. He stops what he's doing and checks with the front desk. Two assistants stop what they're doing to rifle through other lab tests and nearby files. Was it misplaced? Did the lab send the result?

In the end, Dr. Schmidt sends Amber Johnson back to the lab for a recheck. Unheralded, this transaction becomes one of the 20% of lab tests ordered in the United States because the results of the previous tests cannot be found.

Dr. Schmidt's dilemma is far from unique. It is one of a million such daily snafus across the country, the consequence of a paper-driven system that relies on the memories of patient and clinician.

As medical research and science-based medical practices have multiplied, the human brains of even the most gifted physicians cannot hope to keep up. This was made starkly evident in a landmark 2003 RAND study led by Elizabeth McGlynn, which revealed that on average,

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Robert Wood Johnson Pursuing Perfection Site

A community approach to chronic disease

Although Southwestern Pennsylvania has more than its share of chronic diseases—especially diabetes—it is not the only region of the country to discover its quiet epidemic. The New York Times recently concluded a multi-part series on New York's own diabetes epidemic*.

Whatcom County, Washington, population 180,000, began to examine how it treated people with chronic diseases over a decade ago.

"We found we did well in treating your broken hand, but not so well if you had a disease that needed constant checking," said Lori Nichols, Director of the community-based Pursuing Perfection and HInet programs. "We found that we were not getting the right information to the right place at the right time."

In 1990, 84 physicians met hospital executives for two days to discuss their vision for seamless care for the people of Whatcom County.

When Washington State mandated managed care, a Physician Hospital Organization formed, the Whatcom Integrated Delivery System (WIDS). Although WIDS disbanded when the mandate was rescinded, its Quality

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Inside

*www.nytimes.com/pages/nyregion/nyregionspecial5/

Physician Champion Profile: Second in a series

Dr. Eileen Boyle champions diabetes care

Eileen Boyle, M.D., Associate Medical Director of the East Liberty Family Health Care Center, is no stranger to community collaboration in the interest of improving patient care. Dr. Boyle has interacted with 11 community health centers regionally, and six nationally. These interactions have allowed her to see proven "best practices" for diabetic patients, and begin to apply them in the East Liberty Center.*

Dr. Boyle has become the champion of the Center's participation in both the national and Western Pennsylvania Health Disparities Collaborative (WPAHDC). And now, with a grant from the Jewish Healthcare Foundation, Dr. Boyle is a PRHI Physician Champion as well. (See January 2006 *PRHI Executive Summary*.)

> *"Good care takes a lot of time if I'm doing it all myself. But if we work as a team, we can have a planned visit, and we won't miss anything. "*
>
> *—Eileen Boyle, MD, Assistant Medical Director East Liberty Family Health Care Center*

Dr. Boyle formed an internal quality improvement team from all departments within the agency to focus on care of the Center's approximately 500 diabetic patients. The aim is to integrate best practices from a national chronic care model into the Center's practice.

In her 19 years of practice, Dr. Boyle's philosophy has been to provide the best care to the patients. In her words, "Good care takes a lot of time if I'm doing it all myself. But if we work as a team, we can have a planned visit, and we won't miss anything. We are changing the system to meet the needs of diabetic patients by using a systems approach. Rather than imposing a one-size-fits-all method onto our physicians, this approach will actually have the opposite effect. By providing the needed supports through a planned visit, the physician will actually be able to be more individualized in the time he or she spends with the patient, because every member of the team will be involved. And by bringing in more community resources on site, we will provide the education that our patients currently do not receive."

** The East Liberty Family Health Care Center is a faith-based, federally funded community health center serving the East End of Pittsburgh since 1982*

Costly in many ways

Like community health Centers across the nation, the East Liberty Family Health Care Center, serves a primarily low-income, minority population, where diabetes is prevalent and too often, not managed well. Poorly managed diabetes can affect every other organ system in the body and result in complications such as heart attack, stroke, blindness, leg amputations and renal failure. In terms of human suffering as well as medical cost, addressing these devastating complications is far more costly than good self-management.

The Center's population is particularly vulnerable. Western Pennsylvania has higher diabetes rates than the rest of the country. In Allegheny County, the rate of limb amputation and death for diabetics who are African Americans is about twice that of whites.

Improving outcomes starts with the patient visit

By redesigning the Center's typical diabetic patient visit using proven practices from the national collaborative, the Center aims to dramatically improve self-management and clinical outcomes for its diabetic patients. The model has 6 components:

1. **Evidence-based guidelines to provide decision support**. The collaborative has identified three benchmarks (the ABCs of diabetic care) from Healthy People 2010 to help the Center's practitioners measure the impact of quality improvement initiatives on the health of its diabetic patients:

   A: **Hemoglobin A1C levels of less than 7%** (Center's baseline was at 9%, and between June and December 2005 dropped to 8.3%).

   B: **Blood pressure below 130/80**. Only 1/3 of the Center's diabetic patients currently meet this standard.

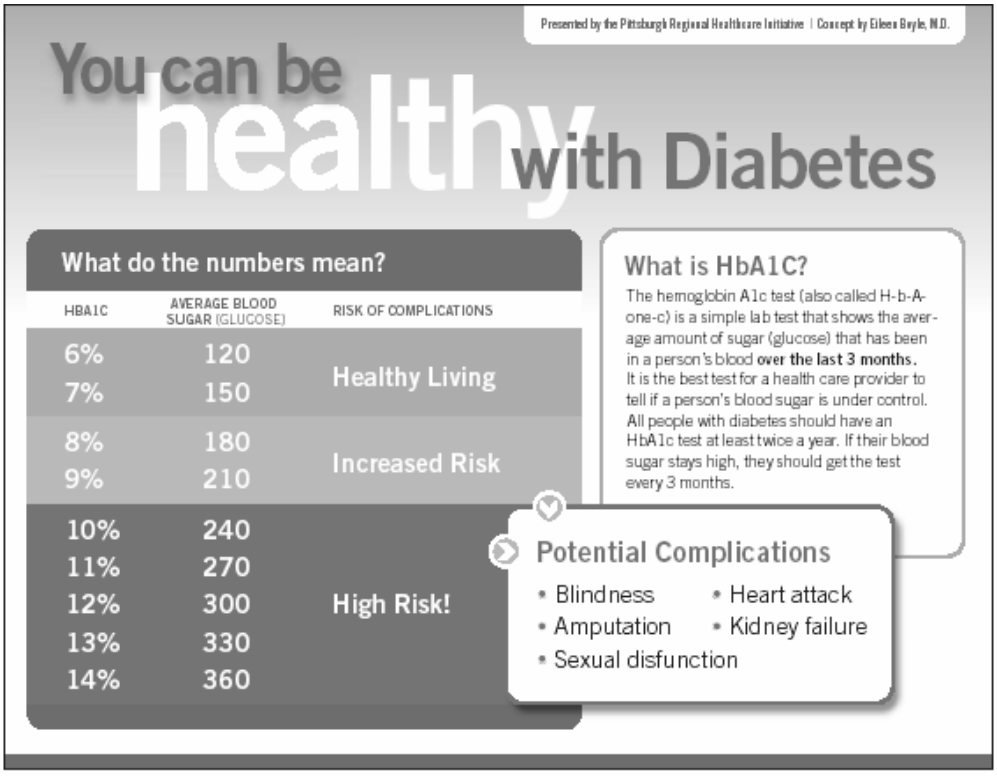
   C: **LDL cholesterol below 100**. Currently only 45% of the Center's diabetic patients meet this standard.

2. **Clinical information Systems** The Center has been using an electronic medical record for more than 5 years, placing it significantly ahead of the curve from most primary care

practices and even many hospitals. However, through its participation in the collaborative, it has now added the Patient Electronic Care System (PECS) Registry to its practice, which provides excellent monitoring of the Center's diabetic patients as a group. It reports population-based data, not just individual data, so that the Center can better track the impact on the entire population it serves. The Center has begun using this system on 100 patients as a test case.

3. **Delivery System Design**. This is the primary focus of interventions being planned at the Center. The entire visit for a diabetic patient is being redesigned. Templates are being redesigned to delegate specific tasks for MAs, nurses, and MDs to be followed on every diabetic visit. Group visits with greater emphasis on patient education will be tested. A diabetic educator may be brought on site. Outcomes will be measured.

4. **Self management support**. Each patient is asked in each visit to identify one behavior that he or she would like to change (such as nutrition, exercise and stress reduction.) Visual cues, like the poster above, help motivate people toward self management. Specific goals are set (i.e., "walk for 30 minutes 2 days a week" rather than "exercise more") and progress is monitored. By involving the patient in the selection of the behavior, better outcomes are virtually assured. In fact, in between June and December 2005, the percentage of patients setting and documenting their goals rose from 0% to 60.5%.



This poster, created by Dr. Boyle with PRHI, offers a hopeful message to patients about self-management: *You can be healthy with diabetes*. This poster (in full color) will be available to for *FREE* download from the PRHI website following the Chronic Disease Forum March 28.

5. **Community resources**. The quality improvement team is identifying and bringing in community resources to complement the internal services it already provides. The team is currently exploring bringing a volunteer ophthalmologist and an endocrinologist onsite to provide additional services greatly needed by its diabetic patients. Other community based resources, such as the nearby faith-based "Healthy Hearts and Souls" program may be brought on site as well.

6. **Healthcare organization**. Through the work of the cross-organizational quality improvement team, the practices that work in the early phases of the Physician Champion Program will be spread throughout the entire Center. These results will then be shared throughout the region.

Eileen M. Boyle, M.D.

Education and Training

1978, Bachelor of Science, Biology, (Magna cum laude), University of Pennsylvania

1983, M.D., Hahnemann Medical College, Philadelphia

1983-86, Internal medicine internship and residency, St. Vincent Hospital, Worcester, MA

Positions and Appointments

1986-present, East Liberty Family Health Care Center, Pittsburgh, PA Internal Medicine staff physician, Clinic Manager, Associate Medical Director

1990-91; 1994-97, Clinical Preceptor, UPMC Shadyside Internal Medicine Residency Program. Dr. Boyle supervised Internal Medicine residents caring for minority patients in an outpatient setting.

Active Medical Staff member: UPMC Shadyside, UPMC St. Margaret, The Western Pennsylvania Hospital

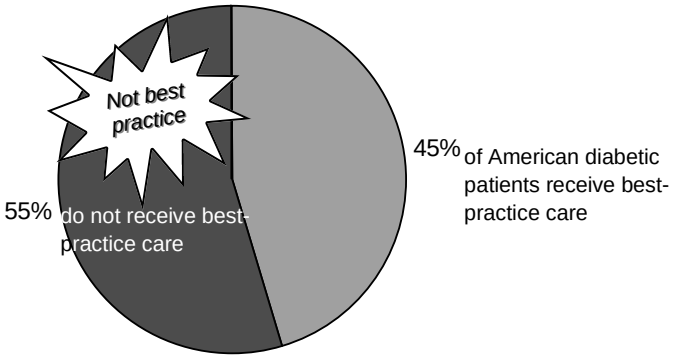
From Page One

Chronic care: the 45% solution

Americans receive care for chronic illnesses in accordance with best practices only 55% of the time. Among diabetic patients, the number is just 45% (chart, right). Paper and the unassisted mind are no longer sufficient for today's standard of care. As Newt Gingrich said, "Paper kills." Gingrich, former Speaker of the U. S. House of Representatives, founded the Center for Health Transformation, a public/private partnership urging technological reforms in health care.

Just 45% of diabetics receive best-practice care.

Can we do better?



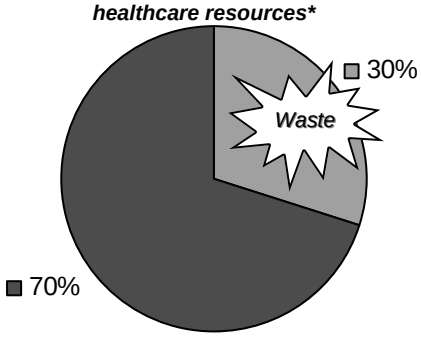
The advent of electronic health records will be as significant as the discovery of penicillin.

—Bill Saporito, "The E-health revolution," Time magazine, June 27, 2005.

Study after study estimates that 30% of healthcare costs—*or more*—can be attributed to poor quality of care and wasteful processes [chart, below]. For example, 1 in 7 hospital admissions occurs because care providers do not have access to previous medical records. And 20% of lab tests are requested because previous results are not accessible.

The Cost/Quality Opportunity:

Poor quality of care wastes 30% of healthcare resources*



*Fisher, Wennberg, et al. Annals of Internal Medicine, 2003

Finding and following those who need care

The best care will not help people who do not come in to receive it. When workers at the UPMC St. Margaret Lawrenceville Family Health Clinic decided to apply the principles of Perfecting Patient Care to their work with diabetic patients, they immediately ran in to problems. Just finding all of the diabetic patients required a tedious, time-consuming chart review.

The staff at LFHC used a one-at-a-time approach to create a database of all diabetic patients. They follow up with doctors and staff to ensure that anyone newly diagnosed, or any new patient with diabetes, is added to the list. They follow lab results to see who is getting regular blood tests, eye exams and so forth, and cross-check with reports from insurance agencies. They identify people with barriers to care. Now:

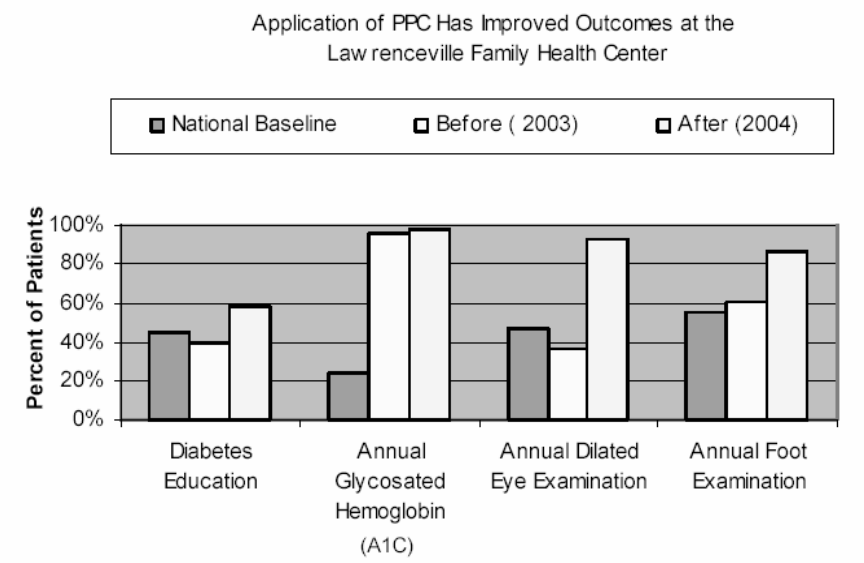
- Patients who may have missed a blood test or a checkup receive a reminder letter or even a phone call. As a result, regular, scheduled visits by diabetic patients are up.
- Every month, 30 to 40 patients are invited to class to learn ways to manage their diabetes. As attendance has picked up, 60% of patients are coming to class, and 95% of attendees have shown clinical improvement.

EMRs could revolutionize care

An electronic medical record (EMR) is seen as the fulcrum on which high-quality, efficient chronic care rests. The staff at LFHC created their own simple registry, focused strictly on providing high-quality care for patients, one at a time.

Currently, most electronic systems focus on improving the efficiency and accuracy of scheduling and billing. Few have designed their software with a model of care in mind. Software components that assist clinical performance, when they are developed at all, are added on as afterthoughts.

Physicians need an electronic system that can help them identify, for example, which diabetic patients have not come in for a follow-up visit in the recommended 3-6 month period, or which ones need dilated retinal exams. Most EMRs have individual patient record

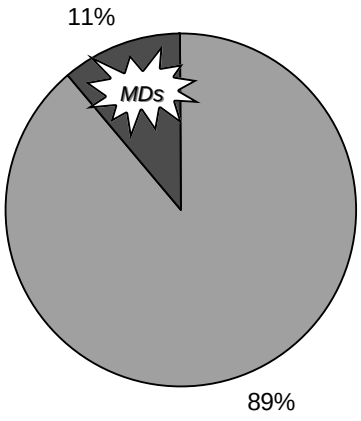


In addition to gains made with their home-grown registry focused solely on quality of care, LFHC achieved gains in diabetic care through the application of hands-on, non-electronic process improvement strategies using PRHI's Perfecting Patient Care™ System.

templates that would allow this, but lack a registry function that would allow doctors to track their overall performance.

Physicians need electronic systems that allow them to trend their own evidence-based care over time, to pinpoint areas for improvement. For example, what percentage of diabetic patients received dilated retinal eye exams last year, or monofilament foot exams with each visit?

Misaligned incentives: Who benefits from EMRs?



While physicians hold the key to digitizing patient records and must bear the cost of doing so, only 11% of the captured savings accrue back to them.

With paper systems, such as LFHC's, gathering basic data requires hours of intensive chart review. With the right electronic system, these data could be regularly incorporated, revolutionizing the way care is delivered and improved upon.

To make the most of an EMR, therefore, it is not enough to simply "plug and play"—overlay a digital system over the current method of doing work. The power for EMRs to affect quality lies in their ability to illuminate work processes and help redesign them.

Who pays? Who benefits?

The United States lags behind other western countries in adopting a national standard for electronic medical records. In the U.S., large hospital systems are more likely to have capital to invest in a conversion to EMRs than small, solo physician practices.

But while most Americans get their health care from small practices, only 15% of all primary care physicians and 6% of solo practitioners have EMRs.

In spite of a growing interest, EMRs cost about $10,000-30,000 per physician—a daunting barrier to practices operating on slim profit margins. An additional barrier is the misaligned incentive. Although primary care practices hold the key to digitizing patients' records—especially for the chronically ill—only about 11% of the captured savings are likely to accrue to investing physicians.

Most electronic systems focus on scheduling and billing, not on tools for clinical improvement .

Chronic Care Forum

However, a recent wave of regional, state and national resources have been brought to bear on subsidizing the costs for physicians to adopt health information technology.

On March 28, PRHI and the Allegheny County Medical Society will co-sponsor a regional forum on EMR in the treatment of chronic conditions, particularly diabetes. The Forum will address some of the critical issues of interoperability, cost, return on investment, and quality of care and showcase some of the resources available to assist physician practices in selecting an EMR system and preparing offices to make the most of them.

Please see page 7 for registration information.

Robert Wood Johnson Pursuing Perfection

From p.1

One community's approach to chronic care

Improvement group continued to meet with community stakeholders like the health department and local payors. The QI group, the Community Health Improvement Consortium (CHIC) selected quality improvement issues with these attributes: they required collaboration of several entities; they were measurable, and there was readiness in the community to deal with them. Using a weighted matrix, the group arrived at four areas of concentration: 1) diabetes, 2) congestive heart failure, 3) tobacco cessation, and 4) mammography.

> *"When patients participate in the design, they make an absolutely transformational contribution."*
>
> *—Lori Nichols, HInet Director, Whatcom County Pursuing Perfection site*

As participants in the Washington State Diabetes Awareness Project, CHIC members agreed on evidence-based guidelines for care. Then the power of the EMR technology became evident. CHIC members agreed to document, for example, diabetes care, populating a dozen fields present in the EMR—and a community-wide diabetes registry was born. Physicians can see how individual patients are doing, and check their own performance as well.

"Most wired" community

At about the same time, 1990, the Sisters of St. Joseph of Peace, at the helm of the 6-hospital PeaceHealth System, took a risk by investing heavily in electronic medical record (EMR) technology. The software, developed in nearby Seattle, over time has become IDX Last Word, (now GE). Today, all physician offices can view the hospital EMR. The majority of labs in the county are reported in it, and now through a joint venture with an imaging center and a large multi-specialty group, even x-rays are available. Now physicians have access to real-time information kept at the hospital, even if they themselves do not have EMR technology.

HInet: local information superhighway

In 1994, a local Blue Shield licensee and St Joseph Hospital asked how they could get more information to and among physicians. Already, 68% of physicians' offices were submitting claims data electronically. What if an information superhighway, in the form of a community-wide physician intranet, were made available?

The local insurer paid to wire 105 physician offices with PCs and printers. The cost of operating the network was shared by the hospital and payor with no charge to the physician for the first three years. The full-service intranet, called HInet, has grown to offer not only the hospital EMR, but e-mail among physicians, listservs for special interest areas, subscription patient information and library resources, a help desk, consulting services—even SPAM protection.

The three-year pilot period expired and physicians were called upon to pay for the service. What happened? Today 99% of physician practices subscribe, as well as 8 of 9 skilled nursing facilities. Today, over 2100 PCs are in use in physician practices. In fact, there are now more PCs than network users, indicating that physicians also log on from home. Whatcom

Pursuing Perfection in Whatcom County encourages better management of chronic disease by putting patients at the center. Patients can create their health record and map their progress.

County has been called the "most wired" medical region in the country.

Involving patients

Whatcom County received a Pursuing Perfection grant from the Robert Wood Johnson Foundation in 2001, which enabled it to extend the conversation to patients. In fact, the resulting web-based tool may make the patient the hub of his or her own information.

This secure, internet-based, patient-centered tool, called the Shared Care Plan, is available to any resident in Whatcom County (www.sharedcareplan.org). Patients can track their own lab results and recent diagnoses, enter their medication lists, drug allergies, health goals, advance directives and so on. They can also receive their information: the Shared Care Plan "talks" to the hospital EMR, electronic prescription software, and someday, imaging software. The Shared Care Plan also links patients with the subscription-only patient information site, Healthwise, and soon Krames.

"How did we know what to offer? The patients told us," says Nichols. "The Shared Care Plan puts information in their hands and engages them in managing their conditions."

Patients told the team that they needed more than an online tool: they needed people to help them navigate the healthcare system to get the care they needed. The Pursuing Perfection project funded several Clinical Care Specialists, community-based professionals who fill healthcare gaps. Clinical Care Specialists break through red tape when a patient needs to be seen; teach self-management skills and link patients with necessary resources for conditions like diabetes; and translate between patients and health care professionals.

Results

Since the Pursuing Perfection grant enabled Whatcom County to implement the Shared Care Plan and Clinical Care Specialists, results have been encouraging. Patients report improved quality of life, less depression, improved functional status and increased confidence in managing their own health. Patients and physicians alike report improved relationships and better visits as a result of the Shared Care Plans. More patients are avoiding hospitalization and ED visits, resulting in savings of about $3000 per patient per year.

A lesson in transformation

"Possibly the most important thing we have learned," says Nichols, "is that when patients participate in the design, they make an absolutely transformational contribution."

Patients sit on the Pursuing Perfection Leadership Board, on the Patient Family Advisory Board, on the design teams with the hospital. Patients sat on the interview panel when the Clinical Care Specialists were hired.

"Their assessments of the candidates were sometimes very different," says Nichols. "The resulting conversations on the panel resulted in selections both patients and clinicians agreed upon."

Pittsburgh Regional Healthcare Initiative

Excellence in Chronic Care: Regional Forum 2

Electronic Medical Records and Chronic Disease

Electronic Medical Records (EMRs) can be a critical tool for tracking and improving the care you deliver to patients with chronic illness. Join this community forum to discuss ways to make electronic tools more widely available and more effective in quality care. At the end of this forum, participants will be able to:

- Identify several national and regional resources available to assist physician practices in selecting, adapting, and implementing an EMR
- Describe several aspects of work redesign that should precede installation of an EMR in order to optimize its use in improving patient care

Consider attending if you are thinking about acquiring an EMR for your practice or if you want to become more effective in using your EMR for quality improvement (physicians and office staff welcome).

When:	Tuesday, March 28, 5:15-9pm
	A light supper will be served 5:15-5:45pm
Where:	Allegheny County Medical Society
	713 Ridge Avenue, Pittsburgh, PA 15212
Contact:	Tania Lyon, Ph.D.
	412-586-6709; tlyon@prhi.org
Cost:	Free of charge
CMEs*:	3.0 CMEs (AAFP or AMA PRA Category 1 Credit™)
Register online:	http://www.prhi.org/chronic2006-forum.cfm

** * This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the PA Medical Society and PRHI. This activity has also been reviewed and is acceptable for up to 3.0 Prescribed credits by the American Academy of Family Physicians (AAFP).*

Pittsburgh Regional Healthcare Initiative

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Calendar, Winter 2006

Day	Date	Time	Event	Place	Contact	CMEs offered?	Register
Thurs	April 6 June 15	8a-5p	PPC 101	PRHI Offices Centre City Tower 24th floor 650 Smithfield Street	Barbe Jennion, 412-586-6711 *bjennion@prhi.org*	Yes	Yes
Mon - Thurs	March 20-23	8a-5p	Perfecting Patient Care™ University	Rodef Shalom Congregation, Squirrel Hill			
Tues	March 28	5:30-9p	Chronic Care Forum "Using an Electronic Medical Records	Allegheny County Medical Society 713 Ridge Avenue Pittsburgh, PA 15212	Tania Lyon, Ph.D. 412-586-6709 tlyon@prhi.org	Yes	Yes
					Register at www.prhi.org/chronic2006-forum.cfm		
Coming in April							
Thurs	Apr 27	8:30a-2p	3rd Annual Working Hearts Day	PPG Wintergarden	workinghearts.org		

PRHI Executive Summary is also posted monthly at www.prhi.org
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