Indiana Health Information Exchange

Project: Beacon Community

Second Annual Report
December 2011

Indiana Health Information Exchange

Table of Contents

1 Indiana Beacon Program Summary

Background

Indiana Health Information Exchange submitted its Beacon Application in January 2010. As the name implies, IHIE is a Health Information Exchange. In partnership with the Regenstrief Institute, IHIE participated in managing the nation's largest clinical repository, the Indiana Network for Patient Care (INPC).

Although this repository is large, it is still a work in progress with respect to Indiana. In 2010, clinical information was collected from 42 hospitals (of 120 in the state), two freestanding imaging centers, one medical group, and no independent laboratories. It also receives statewide eligibility and claims information from one large commercial insurer (Anthem Blue Cross and Blue Shield), from Medicaid and, for the Indianapolis area, a portion of the Medicare population under a Medicare Demonstration program. The information being collected has expanded to include 57 hospitals, three imaging centers, one medical group, three independent labs, two long term care facilities, five physician sites, and three commercial insurers, with more growth anticipated in the future.

IHIE provides the following services:

Clinical messaging

In January 2010, IHIE provided clinical results to about 14,000 physicians from 46 participating institutions, to delivering results to more than 18,000 physicians within 74 participating institutions. IHIE delivers approximately six million results to these physicians monthly.

Clinical abstracts

Participating Emergency Departments can request a clinical abstract when a patient enters their facility. The INPC responds to thousands of requests for clinical abstracts per month from 35 participating EDs. This represents a 40% growth from the 25 EDs that participated in 2010.

PHESS

IHIE provides an early warning service to the Indiana State Department of Health. This service notifies ISDH when unusual admissions activity occurs in Emergency Departments. In January 2010, 75 hospitals were providing clinical information to the INPC. Currently, 112 hospitals feed their clinical data into the INPC, a 50 percent increase.

Quality Health First® Program (QHF)

The QHF® Program combines claims information from participating carriers with the clinical information within the INPC to produce quality reports for 20 measures at the level of the individual primary care physician (PCP) and medical group. Participating carriers use these reports in their pay-for-performance program(s). In January of 2010, only Anthem Blue Cross Blue Shield was actually paying an incentive to PCPs. Participation in QHF is voluntary. In January 2010, only 20 percent, or 990, of the state's 4,754 PCPs were participating in the QHF® Program. Of these, 944 participating providers were from the Beacon region's 2,218 providers. As of November 30, 2011, QHF® Program enrollment is 2,047 PCP statewide, with 1,612 of these in the Central Indiana Beacon region.

Beacon Purpose

The goals for the Beacon Collaborative are consistent with the vision of QHF: to improve health care quality, efficiency and population health in the target geographic area. In doing so, IHIE explores and tests the use of information technologies that might be replicated in other areas of the country. The activities can be divided into two areas.

The first endeavor is to materially expand the Quality Health First® Program by:

i. Adding more data sources to the INPC and also acquiring new types of information (e.g., blood pressure, height/weight) directly from physician EMRs.
ii. Improving the value of the program to payers by adding utilization measures and publicly reporting quality results.
iii. Expanding the program by enrolling more providers in more communities and adding more payers.

This combination of activities is intended to improve the care for more people, expand the range of care that is measured, and improve and enhance the financial sustainability of the QHF® Program.

The second area of effort is a collection of targeted actions that focus on improving specific patient outcomes. These include:

i. **Medication Possession Reporting.** The objective is to develop a new measure that will be of value to participating providers and payers that will lead to an increase in patient compliance with regards to medical advice.
ii. **Value Based Benefit Design.** This multi-stakeholder initiative explores how changes in insurance benefit design and employee incentives and education will improve patient compliance with medical advice and foster a positive change in lifestyles.
iii. **Value-added services enabled by information technology and the clinical repository.** The current focus of this initiative is on real-time notification of payers of important clinical events such as inpatient discharges and ED visits by their subscribers.
iv. **Reducing readmissions.** This intervention consists of electronic home monitoring of patients discharged with diagnoses of CHF or COPD. The purpose is to demonstrate that electronic home monitoring will reduce readmissions.
v. **Intervening with patients with diabetes whose HbA1c levels are not controlled.** This intervention tests which of three program-designs (nurse only, nurse / dietician, pharmacist) produce value for a patient and a payer.
vi. **Meaningful use.** This two-part project explores how a community might increase its informational base with respect to adult immunizations while another Central Indiana Beacon program is working with the local RECs to improve adoption and use of EMRs.

In all of these initiatives, IHIE is promoting change along the quality, efficiency or cost dimensions, measuring these changes and developing and testing a business case for sustaining (or not) each of the activities.

Through these actions, improvements to specific measures will be made, including:

- Patients with diabetes:
  - (i) HbA1c control

- (ii) LDL-C control
- Reduce utilization
    - (i) Ambulatory care sensitive inpatient admissions
    - (ii) Ambulatory care sensitive re-admissions
    - (iii) Ambulatory care sensitive ED visits
    - (iv) Inappropriate use of outpatient imaging
- Population Health
    - (i) Colorectal cancer screening
    - (ii) Cervical cancer screening
    - (iii) Data available on adult immunizations
- Increase Meaningful Use

Correlation of Central Indiana Beacon Objectives to Measurable Outcomes

The following chart illustrates how the initiatives above are expected to influence the measureable outcomes.

Indiana Beacon Objective Sub-Projects			Diabetes Control		ACSC Admissions Improvement			Imaging	Increase Preventative Screening			M.U.	
			↓ diabetic HbA1c levels	↓ diabetic LDL levels	↓ ACSC Admissions	↓ ACSC Re-admissions	↓ ACSC-related ED visits	↓ redundant Imaging	↑ Colorectal Cancer Screening	↑ Cervical Cancer Screening	↑ Adult Immunization Data Avilable	↑ Achievement in Meaningful Use	
QHF Focus	**(1A)** Collect more clinical data		S	S	S	S	S	D	S	S		D	
	(1B) Capture more POC data		S	S	S	S	S		S	S	D	D	P = Potential Impact
	(2A) Incorporate affordability measures into QHF (utilization reporting)				D	D	D	D					
	(2B) Incorporate REL data		D	D	S	S	S		D	D		S	
	(2C) Public Reporting		D	D					D	D			S = Supporting Impact
	(3A) Enroll more providers		D	D	D	D	D	D	D	D			
	(3B) ↑ payor participation		D	D	D	D	D	D	D	D			
Individual Interventions	**(4A)** Analytic support for care improvement		S	S	S	S	S	S	S	S			
	(4B) Medication adherence reporting		D	D	D	D	D						
	(4C) Value based benefit design		P	P	P	P	P	P	P	P			D = Direct Impact
	(4D) Real-time payor/provider notifications				D	D	S						
	(4E) Home monitoring for CHF & COPD					D	D						
	(4F) Coordination of care		D	D	D	D	D						
	(4G) ↑ PCP's achieving MU		D	D	D	D	D	D	D	D		D	

Measured Outcomes — National Beacon Objectives → Quality | Cost | Population Health | M.U.

QUALITY HEALTH FIRST® PROGRAM

The Quality Health First® program was launched by IHIE in late 2008. The Program provides physicians with patient-specific information about preventative health care needs and chronic disease management, for the

majority of their patients, while aligning financial incentives with patient outcomes. The QHF® Program is intended to result in healthier patients, reduced health care costs, and outcome-based incentives for physicians.

Background

The QHF® Program was designed to help physicians identify and prioritize necessary health screening and other essential testing for their patients. This is important in the fight to address chronic disease management. Chronic diseases account for more the 75 percent of health care spending in the United States and contribute to three out of five deaths. By focusing on the delivery of quality care and actual patient outcomes, the transition from a traditional quantity reimbursement system to a quality-based system is evolving. By providing in-depth, robust and actionable information to physicians, the QHF® Program is meaningfully impacting health care costs, delivery and outcomes.

Uniqueness

The QHF® Program leverages the support and participation of a sophisticated infrastructure in the Indianapolis area that securely aggregates and accurately delivers clinical data including laboratory results, radiology reports, medication and treatment history, along with pharmacy data from all participating providers, regardless of hospital system or location. The QHF® Program involves 2,047 healthcare providers in 121 communities across Indiana and includes in excess of 3.3 million patients. The Program provides physicians with information on patients regardless of whether they are on commercial insurance, Medicare, Medicaid insurance or have no insurance, providing opportunities for better care for all Hoosiers.

With its large network of data sources, the QHF® Program is able to generate meaningful, provider/patient-specific ambulatory care reports that address patients' most common yet challenging healthcare needs, including preventive medicine and the management of common, chronic diseases like diabetes. Physicians are then able to quickly identify needed tests and screenings, promoting the highest level of quality care specific to the patient. For example, physicians will have access to know which patients are due (or overdue) for a colonoscopy. Physicians will also know which of their diabetic patients are in need of proper blood sugar monitoring and will be able to gauge how well the disease is being managed. Both blood glucose level (HbA1C), and low-density lipoprotein cholesterol, "bad cholesterol" (LDL-C), are part of the measures in the QHF Program.

2 Progress Report

Central Indiana Beacon Map – *How the puzzle fits together*
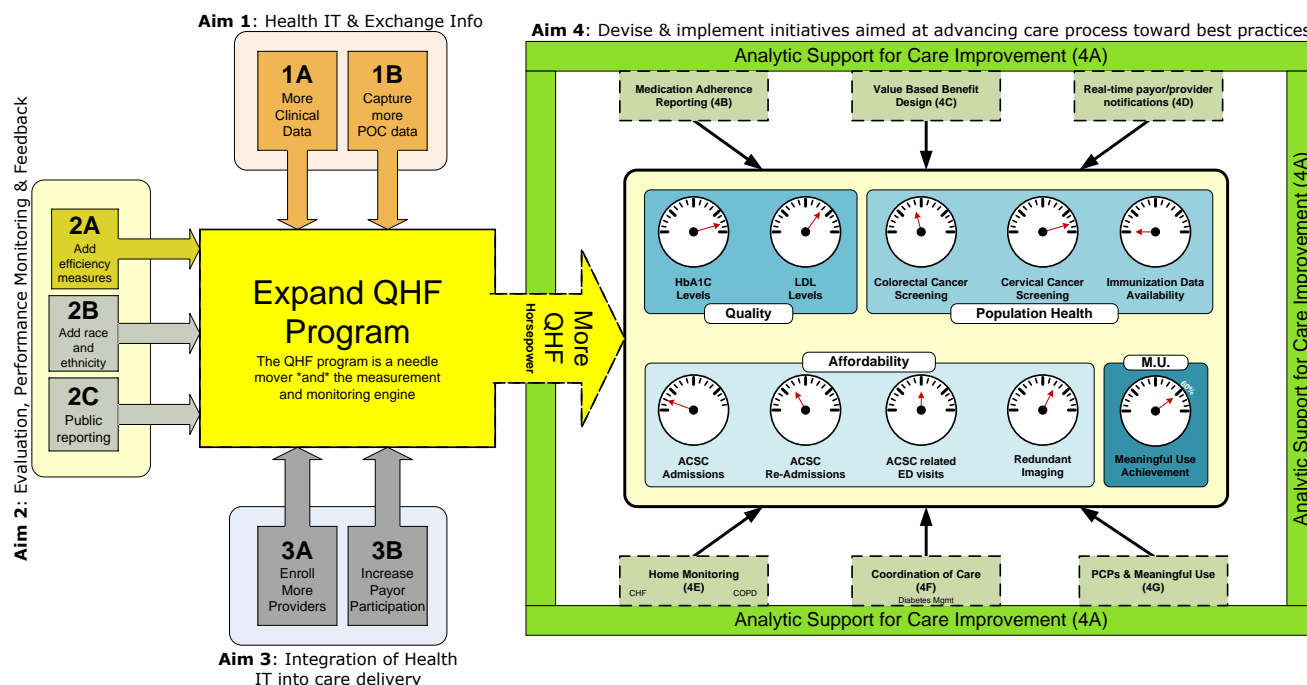
Using the numbering system from the above chart, this section will discuss the status of each Central Indiana Beacon Collaborative activity.

Project 1A – Collect More Clinical Data

Collect clinical information from additional hospitals, independent laboratories and imaging centers.

The reason for collecting more clinical information is so QHF®, PHESS and other developing programs and services can affect more people and become more valuable to the organizations paying for these programs. Two different types of implementations are available. One type is for clinical messaging only (DOCS4DOCS®), where the information is not stored, and the other is a full implementation where the information is stored in the Indiana Network for Patient Care (INPC) and is available to produce valued-added services.

As is shown in the following tables, at the end of 2009, 27 hospitals were feeding clinical data to the INPC (18 of these in the Central Indiana Beacon region). During 2010, the number of hospital feeds increased by 3 (2 in the Beacon Region) and in 2011 another 9 were added (with 4 connections still in process). All of the 2011 connections were in the Central Indiana Beacon region. Over the last two years, the number of data sources

for the INPC increased from 27 to 39 (18 to 29 in the Beacon region) or by 45 percent in total and by 61 percent in the Beacon region.

Current Status	2009 or earlier	2010	2011	2012	Unspecified	Total
INPC						
Live	27	3	5			35
In-Process			4	15		19
Identified				4	64	68
Identified (no contract)					10	10
Grand Total	*27*	*3*	*9*	*19*	*74*	*132*

Following is a list of the Beacon region INPC implementations.

	Hospital	Market	Current Status
2010	Major Hospital - Shelbyville	Shelbyville	LIVE
	Hendricks Regional Health - Danville	Danville	LIVE
2011	Witham Health Services - Lebanon	Indianapolis	LIVE
	St. Clare	Crawfordsville	LIVE
	Columbus Regional	Columbus	LIVE
	St. Vincent Saint Johns	Anderson	LIVE
	Community Hospital Anderson & Madison County	Anderson	LIVE
	IUH Bedford Regional Medical Center (CAH)	Bloomington	IN PROCESS
	IUH Bloomington Hospital (CAH)	Bloomington	IN PROCESS
	IUH Paoli Hospital (CAH)	Bloomington	IN PROCESS
	Riverview Hospital - Noblesville	Indianapolis	IN PROCESS
2012	St. Vincent Mercy Hospital (CAH)	Rural - NE	IN PROCESS
	St. Vincent Jennings Hospital (CAH)	Rural - SE	IN PROCESS
	St. Vincent St. Joseph Hospital	Kokomo	IN PROCESS
	Howard Regional Health System	Kokomo	IN PROCESS
	Greene County General Hospital	Bloomington	IN PROCESS
	Henry County Hospital	Rural - SE	IN PROCESS
	Hancock Regional Hospital	Indianapolis/Greenfield	IN PROCESS
	Reid Hospital & Health Care Services, Inc.	Richmond	IN PROCESS
	Decatur County Memorial Hospital	Greensburg	IN PROCESS
	IUH Tipton Hospital	Kokomo	IN PROCESS
	Pulaski Memorial Hospital	Winamac	IN PROCESS
	Logansport Memorial Hospital	Kokomo	IDENTIFIED
	IUH White County Memorial Hospital	Rural – NW	IDENTIFIED

Summary of Overall INPC Implementation Progress

Of the 132 identified hospitals in Indiana, 35 INPC locations are currently connected to INPC (LIVE Status).

	Implementation Year			
Status	2009 or earlier	2010	2011	2012
LIVE	27	3	5	
IN PROCESS			4	15
IDENTIFIED				4
IDENTIFIED - No Contract				
Total	**27**	**3**	**9**	**19**

Summary of Central Indiana Beacon Region INPC Implementations

Of the 58 identified hospitals in the Central Indiana Beacon Region, a total of 25 hospitals are currently connected to INPC (LIVE Status). Two of these hospitals were implemented in 2010 while five were implemented in 2011. Four hospitals are currently in the process of being implemented while an additional 13 are scheduled to be completed in 2012. Current projections show 72 percent of the Central Indiana Beacon region hospitals will be connected to the INPC by this time next year. This includes the 42 hospitals currently live, in process or signed but not yet implemented.

	Implementation Year			
Status	2009 or earlier	2010	2011	2012
LIVE	18	2	5	
IN PROCESS			4	11
IDENTIFIED				2
IDENTIFIED - No Contract				
Total	**18**	**2**	**9**	**13**

Project 1B – Capture More POC Data

Address high value data element gaps by capturing point-of-care data such as vital signs, in-physician-office orders and labs.

Connecting to physician EMRs to collect additional information is important for two reasons. The first is to capture valuable information that cannot be obtained from third parties such as hospitals, laboratories and imaging centers. Immediate priorities are vital signs including blood pressure, height and weight. The QHF® Program does not report quality measures that use this information today because it would be burdensome for physician practices that do not have EMRs to report these measures as they occur during every patient visit. The number of measures requiring information directly from a patient's medical record will only increase as is evidenced by the ACO requirement to report advice on smoking cessation.

The second reason to collect this information is to lower the costs of reconciliation for physician offices – both for the QHF® program and for the impending ACO reporting. Currently, reconciliation is time consuming and these resources would be better spent improving care as opposed to improving reporting.

While collecting POC data is considered a priority, the work has proven slow and deliberate. Due to the abundance and variety of EMR systems, each effort to implement POC data capture methods is unique. Currently, IHIE has completed interfaces with the following seven medical groups and one lab:

Go Live Date	Organization	# of providers affected
12/2011	Franciscan Alliance	220
10/2011	Premier Healthcare Associates	34
10/2011	Community Group Family Medicine	225 *
01/2011	Hendricks Regional Health	43
01/2011	Women's Health Partnership	43
08/2009	American Health Network	144
03/2008	Community Physicians of Indiana	225 *
01/2008	First Source Labs (on behalf of SS OB/GYN, Wellcare Family Medicine, American Health Network, Brownsburg Family Medical Center, Westside Gynecology Inc, Hoosier Family Health, Women's Health Alliance)	169 (25 in addition to the 144 from AHN)

*This is a common set of providers

These interfaces affect 734 of the 2,047 primary care physicians enrolled in the QHF® Program.

Project 2A – Incorporate Affordability Measures into QHF (Utilization Reporting)

Measure important aspects of affordability and incorporate these measures into the QHF Program's healthcare provider reporting and incentive system.

The information used to identify opportunities to reduce cost is often different from the information that is necessary to improve quality. Efforts to acquire an affordable system to produce comparative utilization information have been underway for over a year. IHIE has received several estimates from different software vendors; however none were satisfactory or affordable. A less expensive system that holds promise is currently being tested.

In the interim, and using Beacon funding, three analysts were hired to directly develop utilization reports. Starting with the Medicare demonstration program's claims and eligibility data set, which includes reimbursement information while commercial claims do not, IHIE worked through numerous data use issues with CMS and recently received permission to share this information with providers.

Selected samples of these reports are appended to this report. The initial set of reports compare one year to the next and includes:

- Original Admission rates – total and separate rates for each of six ambulatory care sensitive conditions
- Readmission Rates – same as above
- Total Admissions – original and readmissions, total and the six ACS conditions
- ED visit rates

IHIE also developed reports that:

- Compare imaging utilization by medical group by (AHRQ-defined) type of image.

- Track cost trends from base year to performance years.
- Compare hospital admission patterns by medical group. This identifies the admitting institution of the patients attributed to various medical groups (this information will be treated as confidential and be shared separately with each group for those considering entering the ACO program).

These reports will be shared with providers soon. As noted above, the search for an affordable partner with a more fully developed suite of utilization reports is on-going. The goal is to be able to offer providers comparative utilization and cost reports on both a type of service (actuarial) and episode of care basis.

Project 2B – Incorporate REL Data and Project 2C – Public Reporting

2B: Incorporate information about race and ethnicity disparities into existing community-level evaluation, performance monitoring and feedback

2C: Begin to publicly report quality results from the QHF Program designed for consumer use

These two initiatives were developed in partnership with a Robert Wood Johnson (RWJ) Foundation-funded community collaborative, of which IHIE is a member. The goal of 2b is to collect Race, Ethnicity and Language (REL) data, store this information in the INPC, and use it for reporting - in order to identify gaps in care by race, ethnicity or language. 2C was to begin to report quality information by provider. The quality information was to be derived from the Quality Health First® Program.

The REL data collection efforts continue within the RWJ Foundation community collaborative but IHIE (and Beacon) are not playing a lead role or funding this effort. Concerning the second initiative, the RWJ Foundation required that IHIE post individual provider quality information on a time schedule that was more aggressive than the QHF® Program governance committees would support. As a result, IHIE is no longer working with the RWJ collaborative on the public reporting initiative.

However, public reporting of quality information at the level of the individual practitioner or medical group is necessary if continued improvement in these "scores" is to occur. While performance improvement in a number of QHF® Program measures is leveling off below aspirations it is believed that public reporting will provide additional incentive for improvement. A great deal of time and effort has been spent to develop reporting formats that have been shared with the Consumer Participation Committee for comment and approval. Additionally, the mechanics of public reporting have been discussed with the QHF® Measures Committee, whose members are predominantly providers, and the Administrative Committee, whose members are primarily payers. Approval for public reporting will be sought at the January and February committee meetings. Public reports are expected by mid-2012.

Project 3A – Enroll More Providers

Enroll additional physicians by identifying and reaching out to primary care and specialty providers throughout HRR 183.

Substantially increasing the number of primary care physicians enrolled in the QHF® Program accomplishes two goals. First, it increases the proportion of Indiana residents whose care is being improved. Second, it increases the value of the QHF® Program to payers by covering more of their members, a critical component of sustainability. By the end of October 2011, IHIE had exceeded the Beacon Program goal of enrolling 70 percent

of the 2,218 primary care physicians in the Central Indiana Beacon region into the QHF® Program. In November, total statewide PCP enrollment reached 2,047. Of those enrolled, 1,612 PCPs, or 73 percent, are located in the Central Indiana Beacon Region.

This rapid growth in participation had one unanticipated consequence. As the QHF® Program rapidly added providers whose quality scores were a little lower than existing PCPs, the quality improvement scores flattened somewhat. Details of this situation are discussed later in this report.
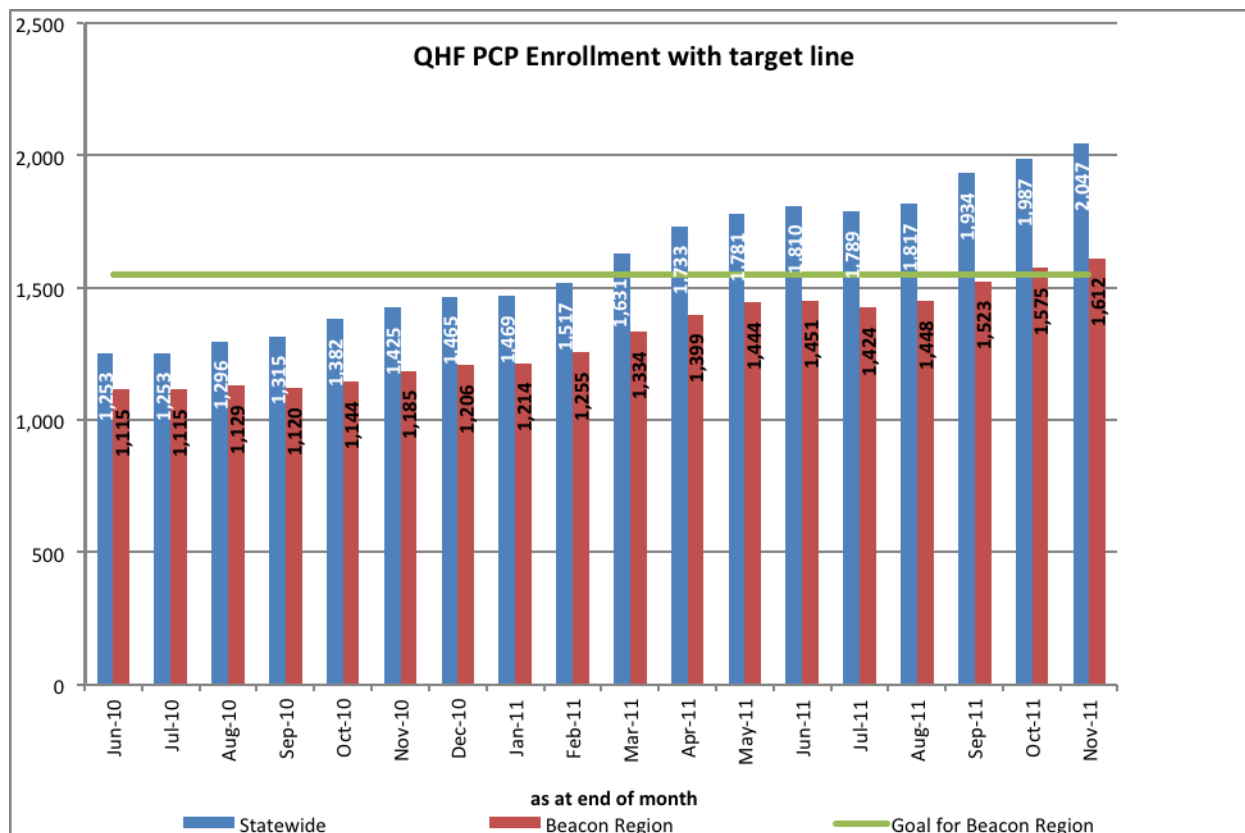
The QHF® Program will begin enrolling cardiology specialists in 2012. This addition has proven to be more challenging than anticipated but IHIE is committed to implementing the attribution methodology and new measures by the end of 2012.

Project 3B – Increase Payer Participation

Develop and implement marketing plan to enroll insurance carriers, third party administrators, Medicaid managed care organizations, and employers in the HRR 183 not currently participating in QHF.

At the beginning of the Beacon Collaborative, Anthem Blue Cross and Blue Shield, the largest carrier in Indiana, was the only commercial payer participating in the QHF® Program. Since then, United Healthcare, the second largest carrier and a third party administration (TPA) have been added. The challenge to adding more payers has partly to do with market composition. Anthem and United represent about 63 percent of the commercial market. No other carrier has more than a small single-digit market share in Indiana. As a result, even large

insurers, such as Aetna and Cigna, are reluctant to develop an incentive system that is unique to Indiana when they have so few covered lives in this state

Project 4A – Analytic Support for Care Improvement

Establish community-wide goals for care improvement

This is essentially a budget category that provides support for the other initiatives (for example, the imaging report discussed above in 2A was funded in this area). As a result, there are no separate goals for this area.

Project 4B – Medication Adherence Reporting

Incorporate medication adherence and other medication related outcomes into the QHF Program.

The extent to which individuals take their medications as prescribed by their doctor is known as "Medication Adherence." Patients with chronic diseases are adversely affected when they do not take their medications properly, and many times the PCPs are unaware of this. The QHF® Program has the capability of calculating the compliance of specific medications for identified populations and reporting the results to each patient's PCP. This information can be reported as an overall rate for each provider and medical group, as well as medication compliance detail about each patient, so the PCP can take appropriate action.

The INPC contains medication information. Participating carriers provide some of this information and some of it is purchased from Surescripts. This is incomplete data because important medications are available at below co-pay costs (e.g., $4) and these prescriptions are most often not reported to Pharmacy Benefit Managers (PBMs).

IHIE has developed two Medication Possession Ratio measures.

- DC11 – Oral Hypoglycemic Medication Adherence for Diabetic Patients with HbA1c >9 percent

  Percentage of identified patients who were at least 80 percent compliant with their Oral Hypoglycemic Medication(s) (OHA)

- DC12 – Statin Medication Adherence for Diabetic Patients with LDL-C ≥100 mg/dL

  Percentage of identified patients who were at least 80 percent compliant with their Statin Medication(s)

These measures are in testing now and are expected be in production by end of the first quarter 2012.

Project 4C – Value Based Benefit Design

Facilitate a multi-stakeholder discussion among providers, carriers, employers and other payers to promote value-based benefit design.

This initiative is jointly funded by Beacon and the Employers Forum of Indiana (an employer-led, health focused, multi-stakeholder organization). In addition, Merck and Sanofi-Aventis sponsored educational speakers.

The project's leadership assembled a workgroup that included large employers, health plans, hospitals, providers, brokers and public health officials. The group held educational meetings and strategy sessions, meeting nine times during 2010 and 2011. A total of 73 unique people attended these sessions.

Speakers included Cyndy Nayer, CEO of Center for Health Value Improvement on May 19 and September 20, 2011 and A. Mark Fendrick, MD, Co-Director, Center for Value-Based Insurance Design, University of Michigan on September 14, 2010.

On September 20, 2011 a survey was administered to determine the level what participants thought of the process, what they'd learned, and what roadblocks they perceived to using their new knowledge to foster desirable changes in benefits. These survey results were used to plan the next steps in the project. Survey responses showed that participants wanted more education, to develop a strategy to include the organizations' CFOs in the educational process, and information on health and lifestyle programs that they can provide to employees.

Based on this feedback, the following will occur during the first six months of 2012:

- Hold two more educational sessions. In February, an outside speaker, who has yet to be identified, will present. In April, the speaker will be John J. Mahoney, MD, Chief Consultant for Strategic Health Initiatives at Pitney Bowes and Medical Director of the Florida Healthcare Coalition.
- Solicit participation by CFOs in these meetings.
- Develop a list of health and wellness programs in two to three communities (e.g., smoking cessation programs, diabetes education and intervention programs). IHIE has discussed this project with Dr. Gregory Larkin, the State Health Commissioner, who has made contact with the manager of the Indiana governor's "In Shape Indiana" web site (www.inshapeindiana.org). IHIE is seeking permission from the State to post information on this web site and further develop the content basis once it has proven to be valued by employers and employees.
- Administer another questionnaire in mid-year to determine how much progress the program has made by comparing these results to the previous information.

Project 4D – Real Time Provider/Payer Notifications

Develop an electronic admissions notification program for inpatient and ED admissions for participating health plans.

This project's goal was to provide health plans with notifications when their members were admitted or discharged from an inpatient facility or were seen in an emergency room. Initial discussion with payers suggested that payers would value this information. Some progress has been made on the technical side, however, at the recent INPC management committee, the committee declined to allow IHIE to use INPC information for this purpose pending an update to HIPAA legislation. Enthusiasm from payers is also waning.

However, one discovery is that real time notification of admissions and ED visits might be especially valuable to providers who are interested in care transitions either because re-admissions might not be reimbursed in the future or because providers are considering forming ACOs and understand that 30 percent or more of their admissions and ED visits will occur outside of the heath systems.

As a result, IHIE is in the process of re-thinking the targeted client and business case for this initiative.

Project 4E – Home Monitoring for CHF & CPOD

Home monitoring of patients discharged with ambulatory care sensitive conditions.

This project seeks to exam the use of telemonitoring with videoconference support among patients recently hospitalized with either Congestive Heart Failure (CHF) or Chronic Obstructive Pulmonary Disease (COPD) for 30 days post-discharge. Initially, this was designed as a randomized control study seeking to enroll 3,000 subjects with either CHF or COPD discharged into a transitional care program. The study originated with a target of 8 different participating hospitals spanning care over 41 counties and representing various geographical locations and size of facilities.

Due to the inherent challenges in randomized control group studies (and especially the onerous patient consent forms), program enrollment has been disappointing. Mid-way through 2011, the project expanded in a number of areas. The number of participating hospitals increased from eight to 14. Additionally, a recent effort to bring in participants from other settings, such as the project sponsor's home health unit, was expanded.

The home monitoring project reached a total of 108 enrolled patient participants. The status of those patients is as follows:

- 93 patients currently participating
  - 52 in the control group
  - 40 in the study's intervention group
  - 1 participating from Home Health

- 15 patients dropped out
  - 13 started in the intervention group
  - 2 started in the control group

| Home Monitoring Patient Volume By Hospital ||
Hospital	Patients
Wishard	44
St Vincent 86th street	19
St Vincent Heart Center	16
Columbus Regional	13
Hancock Regional	10
St Vincent Frankfort	2
St John Anderson	2
Henry County	1
St Vincent Mercy	0
St Vincent Jennings	0
St Vincent Carmel	0
St Joseph Kokomo	0
Hendricks County	0
Witham	0

Home Health	1
TOTALS	108

Because the Beacon collaborative period is more than half over, enrolling 3,000 patients in the randomized control study is not expected. Equipment purchased for the project will be used by the sponsor's home health unit. This use will not be encumbered by the patient informed consent process that inhibited participation in the study.

Project 4F – Coordination of Care

Increase the coordination of care.

A faculty member from Purdue University College of Pharmacy leads this project. The intervention is designed to determine whether three different diabetes management care models are effective. If they are found to be effective and also have a positive Return on Investment (ROI) the intention is to promote their sustainability by working with health plans to find a mechanism to pay for these services. An ROI tool was developed last year. The project leader met with representatives of the two largest carriers to obtain their input and approval of the approach to measuring and quantifying benefits and costs.

Another goal is to directly reduce the proportion of patients in Beacon region that have poorly controlled diabetes, defined as HbA1c > 9.0 percent.

The three different programs are:

- Nurse Care Manager in physician office practices
- Registered Nurse plus dietician in physician office practices
- Clinical Pharmacist in physician office practices

These different program care models will be tested in five different settings. The Beacon collaborative will enroll 750 QHF® Program patients from the Central Indiana region into the different programs and evaluate their outcomes. A web-based tool was developed to facilitate data capture.

This has been a difficult program to launch partly because each of the six intervention programs and each of four medical groups must sign a contract in order to participate. Issues of patient confidentiality, use of INPC data, how payment for data was to be arranged and other complex issues arose. Currently two intervention programs and three medical groups have signed their agreements and the program is being launched.

Project 4G – Meaningful Use

Achieve EHR adoption and Stage 1 M.U. among at least 60 percent of PCP's.

Achieve a 5 percent increase in adult immunization data

IHIE works closely with the Purdue Regional Extension Center to discuss their client's readiness for health information exchange.

IHIE is also communicating with the large and small physician organizations within the Beacon region that may not be Purdue REC clients, offering to assist them with meeting the federally defined health information exchange objectives.

The services IHIE provides to these physician offices for MU are:

a) **DOCS4DOCS® clinical messaging.** IHIE works with the Eligible Professionals (EP) EHR vendor sending the clinical results in electronic HL7 format. The EHR vendors can then incorporate the lab results in discrete data, which addresses the MU Menu Set Objective of Incorporating more than 40 percent of all clinical lab test results into EHR as structured data.

b) **Routing of immunization data to the Indiana State Department of Health's CHIRP program.** EPs can select this as their one Public Health MU objective. IHIE can also forward the electronic syndromic surveillance data from the EPs EHR to the ISDH if the EHR is capable of providing the data to IHIE. Currently, most of the EPs have chosen to send immunizations as their Public Health objective.

c) IHIE has established a specific email address for physician offices to use for exchanging Continuity of Care Documents CCDs. The capability to exchange key clinical information is a Core MU objective for the EPs to test the capability of their certified EHR. The EPs are creating a test patient CCD from their EHR and emailing that CCD to IHIE. IHIE then is responding back to the EP with a test CCD for the EPs to render within their EHR. IHIE currently provides this exchange for 23 organizations.

IHIE is working to make the charter hospital employed physician practices aware of their staggered timeframes for MU attestation. Many of the large organizations are on schedule to meet their first 90 days of meaningful use in 2012. IHIE is available to provide them with the services listed above in bullet c.

IHIE has monthly calls with the Indiana State Department of Health and has a plan in place to establish all new interfaces for public health through IHIE. This involves migrating all existing interfaces from EPs to ISDH to route through IHIE. Pilot projects are beginning to allow for a bi-directional flow of data from EPs to ISDH and back for immunization data.

In terms of tracking progress on this effort, IHIE continues to work with the state's Indiana Health Information Technology organization (http://indianahealthit.com/) to track the self-attestation process. That data (the Eligible Professional's self-attestation) is collected by IHIT for those providers in Indiana. Since providers apply for Meaningful Use incentives under either Medicaid or Medicare but not both, that aggregation occurs at the IHIT level. Once IHIE obtains that information, the list will be filtered by taxonomy to determine the number of primary care physic

Progress specific to immunization

The centralized home for immunization data in Indiana is CHIRP -**C**hildren & **H**oosier **I**mmunization **R**epository **P**rogram (https://chirp.in.gov/home.jsp). Some immunization data exists within the INPC, but the official home and the majority of this data resides within CHIRP. The ability to connect with that data source has been challenging due to contractual and regulatory impediments. Facilitating the process of inputting immunization data into CHIRP is relatively straightforward.

Technically, INPC data sources (e.g. hospitals, etc.) can feed the immunization data they have into the INPC which, in turn, creates an extract that moves along the system and updates CHIRP. Additionally, through the advent of Meaningful Use, more and more point of care EMR systems are able to create and send their immunization data electronically to CHIRP…a process which IHIE/INPC facilitates on behalf of the providers.
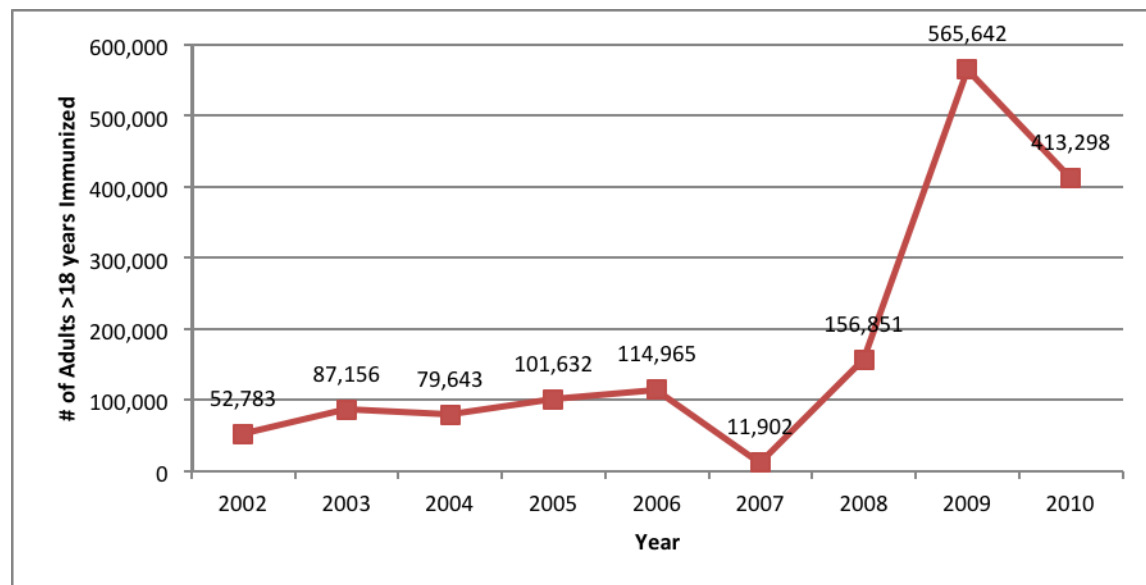
The data below is an extract pulled directly from the CHIRP database showing the annual numbers of reported influenza and pneumococcal vaccinations for adults 19 years of age and older. Over the nine-year period shown, the number of reported influenza vaccinations increased by 683 percent and pneumococcal increased by 92 percent.

The Central Indiana Beacon collaborative goal is to increase the amount of available data by five percent. Continued efforts in facilitating the connection of point-of-care EMR systems to CHIRP as well as bolstering the data flowing out of the INPC and into CHIRP provides a high level of confidence that this objective will be met. Isolating the effects of the efforts, as opposed to the efforts of the Indiana State Health Department and others, will be challenging. However, the 2011 numbers will be reported when they become available.

Influenza Vaccinations

# of Adults 19 and Over	2002	2003	2004	2005	2006	2007	2008	2009	2010
	52,783	87,156	79,643	101,632	114,965	11,902	156,851	565,642*	413,298

*The spike in influenza vaccinations in 2009 stemmed from the increase in H1N1 incidents that year.
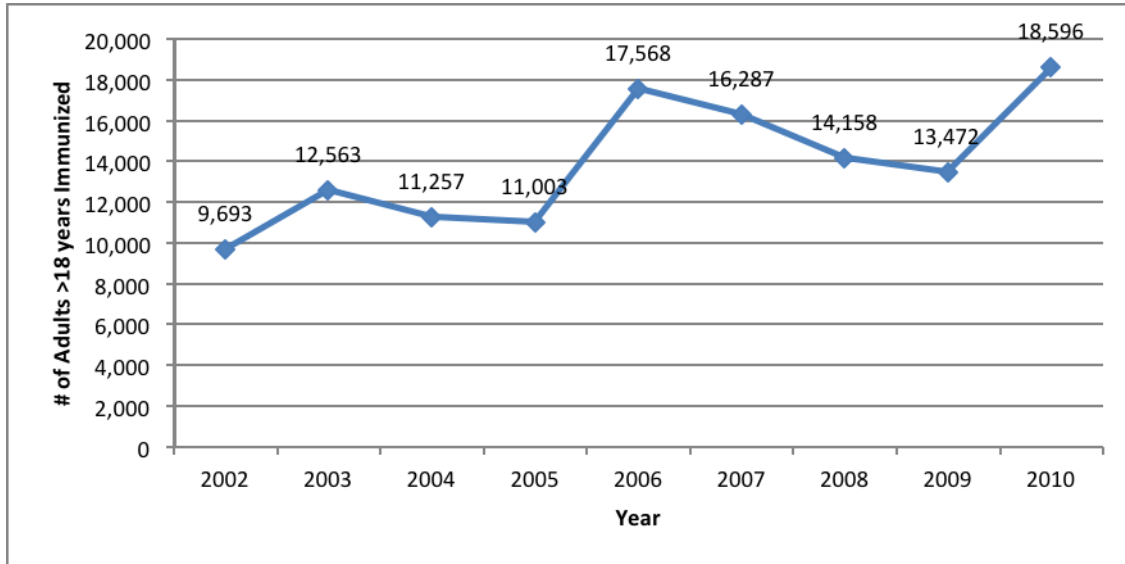
Pneumococcal Vaccinations

# of Adults 19 and Over	2002	2003	2004	2005	2006	2007	2008	2009	2010
	9,693	12,563	11,257	11,003	17,568	16,287	14,158	13,472	18,596

3. Performance Metrics

ID	Target Outcome	Measure Name/ID	Data Source	3Q - 2010			4Q - 2010			1Q - 2011			2Q - 2011		
				Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%	Numerator	Denominator	%
1	Improve by 10% the proportion of patients whose diabetes is under control, as evidenced by HbA1C levels below 9% by 12/31/2012	DIABETES CARE: HbA1c Control =<9%	Derived from claims, clinical repository, POC, and provider reconciliation data	33,238	45,864	72.47%	35,041	47,772	73.35%	36,867	50,145	73.52%	42,684	57,240	74.57%
2	Improve by 10% the proportion of diabetic patients whose cholesterol is controlled, as evidenced by achieving risk-adjusted LDL targets by 12/31/2012	DIABETES CARE: LDL-C Controlled <100 mg/dL for Patients with Diabetes	Derived from claims, clinical repository, POC, and provider reconciliation data	23,235	45,864	50.66%	24,292	47,772	50.85%	24,967	50,145	49.79%	29,347	57,240	51.27%
3	Reduce the number of preventable hospital admissions that are related to ambulatory care by 3% by 12/31/2012	AHRQ Preventive Quality Indicators (PQI)	medical claims & membership	*	*	*	*	*	*	*	*	*			
4	Reduce the number of preventable emergency department visits that are related to ambulatory care by 3% by 12/31/2012	AHRQ Preventive Quality Indicators (PQI)	medical claims & membership	*	*	*	*	*	*	*	*	*			
5	Reduce the number of ambulatory care re-admissions by 10% by 12/31/2012	AHRQ Preventive Quality Indicators (PQI)	medical claims & membership	*	*	*	*	*	*	*	*	*			
6	Increase the data available for adult immunizations by 5% by 12/31/2012	Influenza Vaccination	MCHD InSight dB -OR- the ISDH immunization registry (CHIRP) -OR- the confluence of these data within INPC			**			**			**			**
7	Reduce the number of redundant radiologic studies by 10% by 12/31/2012	Measures to be developed	Claims & clinical data	*	*	*	*	*	*	*	*	*	*	*	*
8	Increase the proportion of patients screened for colorectal cancer by 5% by 12/31/2012	Colorectal Cancer Screening	Derived from claims, clinical repository, POC, and provider reconciliation data	80,270	137,495	58.38%	79,489	137,381	57.86%	90,595	154,231	58.74%	102,831	171,015	60.13%
9	Increase the proportion of patients screened for cervical cancer by 5% by 12/31/2012	Cervical Cancer Screening (18–20, 21–64, combined)	Derived from claims, clinical repository, POC, and provider reconciliation data	128,288	164,324	78.07%	125,535	159,836	78.54%	134,109	169,737	79.01%	149,831	188,419	79.52%

* At this time the capability does not exist to extract the data required to produce a quantifiable value
**While there are a number of adult immunizations available, we will focus on the flu. Baseline data will be obtained from the Indiana State Department of Health and the Marion County Health Department for current levels of immunizations and levels compared to a comparable four-month period at the end of the funding period. The total immunization numbers will be adjusted for population change within HRR183. It is anticipated that data available for adult immunizations will increase by 5%. See trending report for the performance metrics related to this task.

In the Beacon Collaborative application, nine measureable outcomes were proposed. Each will be discussed using the chart below:

Performance Metrics

		3 Q '10	2 Q '11	% Change	Goal
1	HbA1c control	72.47%	74.57%	2.9%	10.0%
2	LDL-C control	50.66%	51.27%	1.2%	10.0%
	P 1,000/Year	**2 Q '09**	**2 Q '10**	**% Change**	**Goal**
3	ACS admissions	32.33	30.08	-7.0%	-3.0%
4	ACS ED visits	21.35	20.42	-4.4%	-3.0%
5	ACS re-adm	9.49	9.04	-4.7%	-10.0%
		4 Q '10	**4 Q '11**	**% Change**	**Goal**
6 (a)	Flu	413,298			5%
6 (b)	Pneumococcal	18,596			5%
7	Redundant Images				
		3 Q '10	**2 Q '11**	**% Change**	**Goal**
8	COL screening	58.38%	60.13%	3.0%	5.0%
9	Cervical CA	78.07%	79.52%	1.9%	5.0%

Patients with Diabetes

The first two goals were to increase by 10 percent the proportion of patients whose blood sugar and cholesterol are under control. Progress is being made toward these two measured outcomes. Control rates have increased by 2.9 percent for blood sugar levels and by just over 1 percent for cholesterol levels.

Over the past year IHIE has faced three challenges in the efforts to achieve these goals. First, the number of PCPs enrolled in the QHF® Program has increased by 60 percent over the last year. Since many of these physicians entered the program at performance levels below those of established physicians, the effect it had was to flatten reported progress. As the proportion of new physicians declines in the future, an increase in performance levels is expected.

Second, as reported elsewhere in this report, the diabetes management initiative is just starting. This will take some time to improve results. Finally, rates of improvement are flattening in many of the QHF® Program measures, even among established physician practices. As a result, IHIE is increasing the pace of efforts to publish physician- or site-level public reporting in an attempt to engage the providers' reputational interests in improvement.

Ambulatory Care Sensitive Utilization

IHIE proposed to measurably reduce ambulatory care sensitive admissions (3 percent), re-admissions (10 percent) and ED visits (3 percent). As explained elsewhere in this report, finding affordable software to report on these measures has been difficult. As a result, people with the necessary skills were hired to internally develop these reports. This effort started with the Medicare demonstration population (results in the above chart) and just recently received permission from CMS to share these results with participating physicians. The comparison above shows substantial progress; however this is confined to a prospectively attributed Medicare population and may not reflect current trends. Measuring these utilization trends for the commercial population will begin in 2012.

Participating providers have a financial incentive to improve these measures under the Medicare demonstration program and many of the other initiatives (QHF® quality reports, the care management intervention, the home monitoring program) are designed to address ambulatory care sensitive conditions. The result of this will be demonstrated progress in future reporting.

Immunizations

The goal is to increase the amount of available information by 5 percent. The intervention is described in section 2 of this report. The above starting figures were provided by the Indiana State Department of Health – the repository for this information – for calendar year 2010. Information for 2011 will be received in the first quarter of next year. Efforts to increase the level of reporting are expected to greatly exceed the 5 percent goal.

Redundant Imaging

After a year of investigation and testing, IHIE was unable to develop a definition of redundant imaging that would be acceptable to participating physicians. As a result, the initiative was changed to report relative utilization rates by type of image by medical group to give medical groups information about how their imaging utilization differed from their peers. Medicare information was used in developing these reports and IHIE recently received permission from CMS to share this information with the medical groups. The measurement process will now be extended to the commercial population.

A new goal for this area is needed. IHIE might propose a "bending of the utilization curve" once current trends are known.
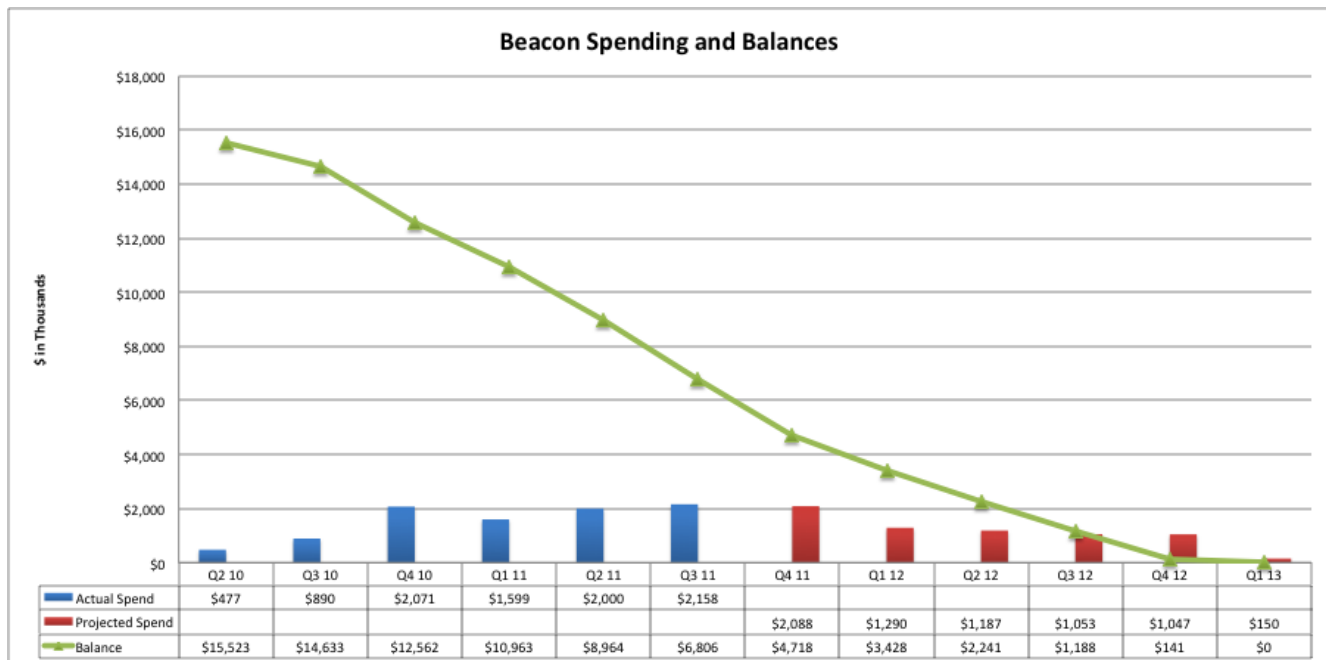
Screening

As noted in the above table, progress is being made on both of these screening measures, despite the challenges discussed above for the diabetes measures. It is believed that the goals originally proposed for both colorectal and cervical cancer screening will be accomplished.

Budget

Through the third quarter of this year, IHIE spent $9.195 million of the Central Indiana Beacon collaborative funds, which is consistent with the timing proposed. Many of the projects required start-up funding but beginning in the fourth quarter of this year expenditures will decline consistently though the end of the program in 2013.

Beacon Spending and Balances

	Q2 10	Q3 10	Q4 10	Q1 11	Q2 11	Q3 11	Q4 11	Q1 12	Q2 12	Q3 12	Q4 12	Q1 13
Actual Spend	$477	$890	$2,071	$1,599	$2,000	$2,158						
Projected Spend							$2,088	$1,290	$1,187	$1,053	$1,047	$150
Balance	$15,523	$14,633	$12,562	$10,963	$8,964	$6,806	$4,718	$3,428	$2,241	$1,188	$141	$0

Clinical Interventions

Overview of Clinical Interventions				Wave 2: July - December 2011			
#	Intervention Type	Total Patients Targeted for Intervention	Total Physicians Targeted for Inteventions	# of Patients	Approx. % of target patients in catchment area	# of Physicians	Approx. % of target physicians in catchment area	Comments
1	Quality Health First	574,069	2,218	579,286	21.5%	1,612	72.7%	QHF patients in HRR 183 were estimated using relative numbers of participating PCPs for commercial and Medicaid
2	Medication Adherence Reporting	46,686	2,218	62,101				Patients with diabetes estimated by applying QHF proportions to each population separately: commercial (9.2%), Medicaid (8.3%), Medicare (23.4%)
3	Value Based Insurance Design							The VBID project is not amenable to this type of reporting.
4	Electronic Admissions Notification	199,000		214,126				Electronic ED notifications have not started. This is the estimated number of ED visits is HRR 183 for QHF members
5	Home Monitoring (CHF & COPD)	3,000		108				This number does not include use of equipment for non-study patients
6	Care Coordination for Diabetes Mgmt Programs	750		38				The first number is the target for the care coordination program discussed elsewhere in this report.
7	Meaningful Use	2,700,000	2,218	2,700,000		2,218		

Notes for 12/2011

Row 1: QHF patients in HRR 183 were estimated using relative numbers of participating PCPs for commercial and Medicaid

Row 2: Patients with diabetes estimated by applying QHF proportions to each population separately: commercial (9.2 percent), Medicaid (8.3 percent), Medicare (23.4 percent)

Row 4: Electronic ED notifications have not started. This is the estimated number of ED visits is HRR 183 for QHF members

Row 5: This number does not include use of equipment for non-study patients

Row 6: This number is the target for the care coordination program discussed elsewhere in this report.

4. A Compelling Story

Below are two real life anecdotes submitted to IHIE by QHF® Program participants describing their use of quality reporting to improve the care of their patient populations. Following those examples are several testimonial quotes from healthcare providers regarding their experiences and impressions of IHIE.

From: Hartman, Dr. Susan
Sent: Friday, November 18, 2011 4:30 PM
To: Jackie Eitel
Subject: FW: QHFs

Jackie

You are always looking for success stories, so here you go…… This MA loves QHF and actually works reports for 3 different offices in her spare time!! She is based at Franklin Township and I send this to you with her permission. I'm going to publish it in our newsletter after Thanksgiving.

Have a great weekend.

Sue

_____

From: Walker, Tabatha L - St. Francis Hospital and Health Centers
Sent: Thursday, November 10, 2011 6:41 PM
To: Hartman, Dr. Susan
Subject: QHFs

Hi Dr Hartman,

I just wanted to share with you a story that happened today at the office. Last night I was working on our QHFs and I was working the diabetics. I noticed one of the Pts had not been in the office in over a year and labs had not been done. So I asked Dr Williams today about the Pt. She said to give him a call and see if we could not get him in soon or see if he had transferred care. So I called the Pt and he had not transferred care and asked if we could get him in tomorrow. Dr Williams had an open slot and we made the appt. I asked if the Pt had eaten anything yet for the day and he said no. So I asked if he could make it over to the hospital to get labs done before his appt tomorrow. He said sure and I ordered the labs. I checked a few hours later to see if he did get the labs done and he did. His glucose was over 300 and his trigs were almost 700. If I had not made the call and got the Pt in who knows what would have happened! Moral of this story, it is amazing just what these QHFs can do for Pts when they are worked! =)

Have a great day,
Tabatha Walker

From: Sarah Hodson
Sent: Tuesday, October 25, 2011 5:16 PM
To: Laura Moorman
Subject: RE: Quality Health First Reports

Hello,

I was talking to somebody about the QHF program and was mentioning the following example and they suggested you would probably like to hear it as well.

Diabetic Eye Exams are not one of the incentivized objectives, but it is one of my passions because for most people, by the time they notice changes in their vision it is way too late to save their vision. As a result of having 200 patients show up on that alert list I knew I had to do something. I found my local ophthalmologist accepts the insurances involved, and got a tear off pad with their number and a map. I wrote the patients name and a simple note about the importance of yearly eye exams. Other staff members helped address the envelopes and mail out the notes.

We have had a flood of DM eye exam notes coming from that Dr as well as others in town. Every time I see one come back with "mild diabetic retinopathy" with a note to return in 6 months I know that we have probably saved someone from losing their eyesight to diabetes.

I just wanted to let you know you have helped me do my job better and say thanks.

Sarah Hodson B.S., NREMT-P
Northeast Medical Associates
1234 E. Dupont, Ste. 6
Fort Wayne, IN.46825
Phone:(260)480-2600
Fax:(260)496-8077

Testimonials

"The use of HIE to provide a safe method of giving the right people the right information in the right place to provide the appropriate level of care, will have a resounding impact on how care is delivered in the future."
- Chuck Christian, Good Samaritan Hospital - Chief Information Officer

"The ability to quickly and efficiently capture patient care data from many sources allows the provider to navigate and integrate the coordination of individual patient care needs."
- Gregory N. Larkin, MD, FAAFP, FACOEM, Indiana State Health Commissioner - Indiana State Health Department

"The ability to see hospital results from other networks and providers ensures good continuity of patient care."
- John Clark, MD, JD., Medical Director Clarian Health

"The quicker I can get the needed information, the faster my office can make clinical decisions and provide good quality care for our patients."
- Dr. Susan Hartman, Family Physician, Center Grove Family Medicine and Associate Medical Director of Quality, St. Francis Medical Group

"With so many disparate healthcare systems, IHIE has built the interfaces necessary for health information exchange. It is collaboration for the common good."
- Vincent C. Caponi, CEO St. Vincent Health

"Easy access to as much information as possible can only help all facility clinicians and physicians provide the best possible care for our patients."
- Diana Boyer, Columbus Regional Hospital - Vice President and Chief Information Officer

"IHIE has been a huge relief of getting information to physicians. It has reduced costs and time spent of the telephone with physicians offices."
- Rebecca Foxx, St. Vincent Health - Physician Liaison

"Previously staff time was spent calling around for records that didn't get there in time or sometimes didn't get there at all. The ability to pull reports in a timely manner promotes best care for patients."
- John Clark, MD, JD., Medical Director Clarian Health

"Previously we could not locate information. Reports used to get lost in paper charting. The Quality Health First® Program helps us remember to focus on preventative care needs at the same time we are treating patients for urgent needs."
– Vicki Burk RN - Clinical Nurse Advocate, St. Francis

"We are learning what we can do to impact the future quality of life, especially in our youth."
– Vicki Burk RN - Clinical Nurse Advocate, St. Francis

"We live in a very mobile society and our patients may have received care in another area of the state or country while traveling. The quality and safety of patient care is enhanced by having as much information available as possible when care decisions are made."
- Diana Boyer, Columbus Regional Hospital - Vice President and Chief Information Officer

"With the advent of IHIE, most results are same day or next day reported, are readily available, easily printed and then routed to the correct patient chart by one clinical staff member daily."

> - Dr. Susan Hartman, Family Physician, Center Grove Family Medicine and Associate Medical Director of Quality, St. Francis Medical Group

"More and more areas are utilizing this secure exchange which provides more up to date information that can be used in caring for all patients."

> - Kimberly Huffer, St. Elizabeth Regional Health - Lead Transcriptionist

"In discussion with our Emergency Department physicians, having a more complete view of a patient's most recent care activities give them an opportunity to provide a much higher level of informed care."

> - Chuck Christian, Good Samaritan Hospital - Chief Information Officer

"The value comes from the qualified information that is provided through the exchange in a very timely manner. The ability of having good information related to a patient's allergies and current medications to prevent errors is very important to all patients in our community."

> - Chuck Christian, Good Samaritan Hospital - Chief Information Officer

"A widely integrated and inclusive population health care data base, like Indiana's health IT network, provides powerful tools for health surveillance and rapid identification of adverse trends."
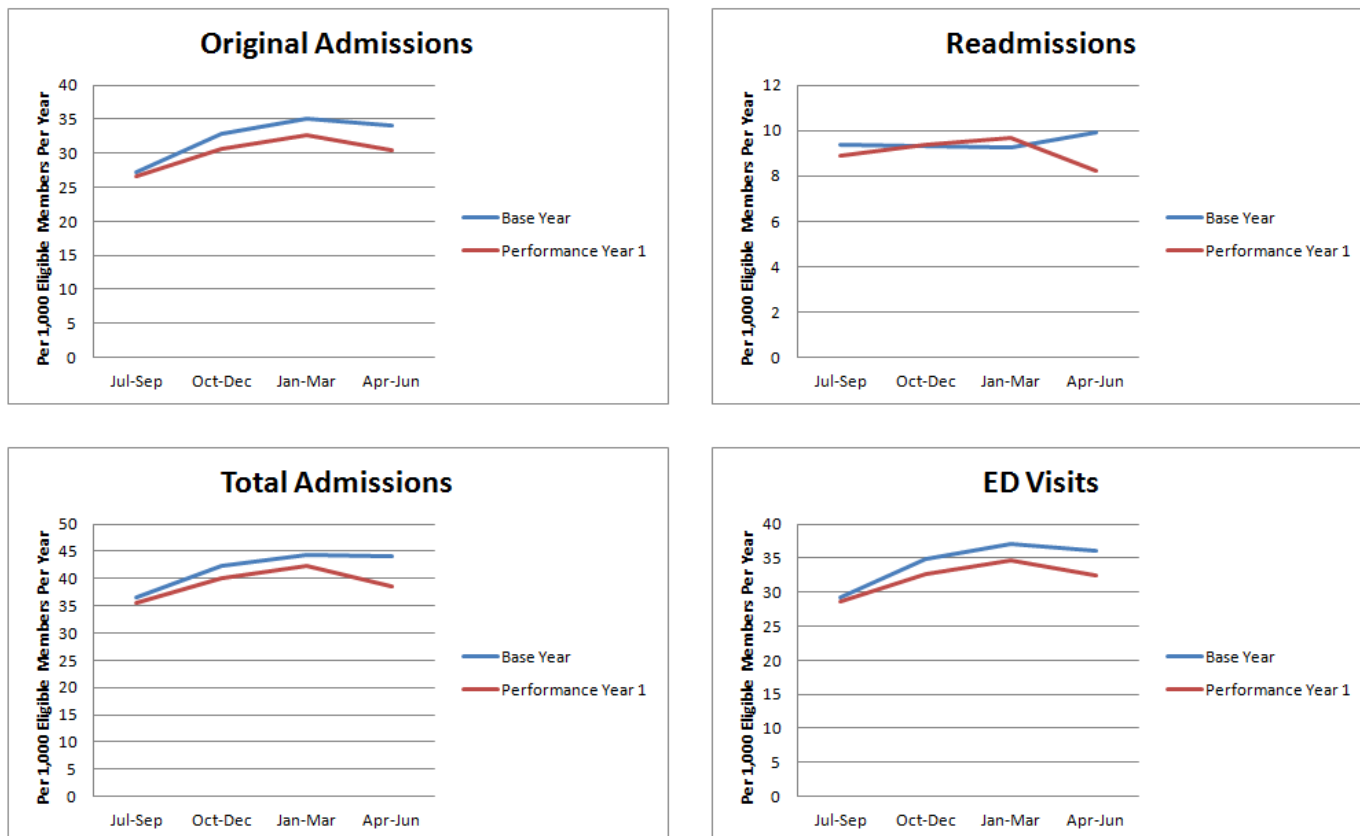
> - Gregory N. Larkin, MD, FAAFP, FACOEM, Indiana State Health Commissioner - Indiana State Health Department

"The benefits of participation in an information exchange are significant for patients, providers and the community health."

> - Gregory N. Larkin, MD, FAAFP, FACOEM, Indiana State Health Commissioner - Indiana State Health Department

5. Appendix A – Utilization Reporting

Utilization comparison – All ACSC Measures Total

Utilization comparison – Medical group comparison across top 20 imaging modalities

Image Utilization Rates per 1000 Medicare Patients per year

Imaging Study Categorized by CCS	Group A	Group B	Group C	Group D	Group E	Average All Patients
Routine CXR	221.1	286.6	327.3	301.3	299.5	276.1
Mammography with CAD	165.2	339.5	189.1	193.4	214.6	230.7
CT Scan Abdomen	139.0	167.5	171.2	158.4	179.6	158.5
MRI	57.4	105.5	92.5	82.8	118.8	89.3
CT Head	74.8	83.5	90.2	84.1	88.1	82.4
Cardiac ECHO	38.7	89.4	56.1	119.3	46.3	62.8
Radiolsotope Scan & Function Studies	41.7	86.8	60.7	77.4	48.0	59.7
CT Chest	49.2	59.8	55.1	52.3	65.8	55.5
Other Diagnostic USG	31.9	47.9	40.5	37.5	49.0	43.3
USG Abdomen	21.7	41.8	34.7	45.9	40.7	35.7
Other CT Scan	27.1	32.3	31.8	61.6	32.9	34.3
Arterio or Venogram	16.9	22.6	10.0	14.9	10.1	15.5
Upper GI Xray	14.2	14.6	12.6	14.3	19.2	14.4
Radio Isotope Bone Scan	11.8	10.1	7.6	12.0	9.9	9.5
USG Head & Neck	3.8	10.2	13.4	8.9	7.2	8.5
Contrast Aortogram	4.7	6.1	2.7	4.8	3.9	4.3
Lower GI Xray	3.0	2.8	1.6	2.3	1.9	2.3
Radio isotope Pulmonary Scan	3.0	2.0	1.8	2.1	2.0	2.3
Cerebral Arteriogram	2.3	2.2	0.5	2.3	0.5	1.6
IVP	0.7	1.2	0.9	1.3	0.6	1.0
Myelogram	0.7	0.8	0.6	0.8	0.9	0.8
Intra OP Cholangiogram	0.7	0.5	0.3	0.2	0.6	0.5
Totals	929.4	1413.8	1201.2	1277.9	1240.3	1189.0
High compared to low						33%