



MEASURING WHAT MATTERS—

electronically, automatically, (somewhat) painlessly.

A report from the real-world field of innovation and implementation

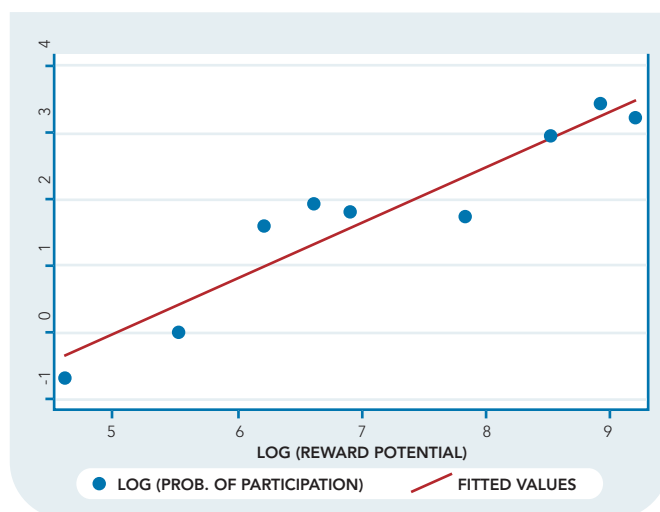
Introduction

The passage of the American Recovery and Reinvestment Act included a long-awaited and much-needed financial boost to the adoption of EMRs in physician practices and the development of the national Health Information Technology grid. And while many are fretting over the details of how the money will be disbursed, whether all practices will choose good systems, and how sustainable the changes will be, we offer some words of optimism and concrete examples showing that the new day that is dawning will be a bright one for the US health care system and, in particular, patients.



ADOPTION WILL SOAR

In a recently published study¹ we demonstrate that incentives have a significant effect on physician behavior. More specifically, we show that physician participation in quality improvement and P4P programs is directly related to the amount of incentives offered. Importantly, our models indicate that most physicians will adopt EMRs as a result of the incentives offered through the HITECH portion of the ARRA. In the chart below we plotted the response to physician participation to BTE's Physician Office Link program, which, among other systems and processes, encourages the adoption of EMRs. With incentives approximating \$45K per physician, the participation rate could be as high as 67%², far beyond any natural tipping point of adoption.



As a result, the single biggest barrier to the deployment of health information organizations, the lack of data to share, will be broken down. Additionally, the lone standing excuse for not using quality measures predictive of patient outcomes – the difficulty of extracting data from paper medical records – will also be swept away. It's therefore time for the private and public sectors to not simply plan, but operationalize the mechanisms that are needed for this new day.

MEASURING WHAT MATTERS

In June of 2008, based on many years of research, we published a paper³ that outlined the results of cost/benefit studies related to certain performance measures. This paper illustrated that intermediate outcomes and other measures that are highly predictive of good clinical results in the management of patients produce the highest returns for patients and payers. Since then, we have published other papers⁴ that show the significant amount of costs spent today on potentially avoidable complications that are incurred by patients with chronic conditions and the lower total costs of care that ensue from better management of patients. Others have recently shown the magnitude of hospitalizations and re-hospitalizations of Medicare patients⁵. It's pretty clear from all these studies that continuing to measure whether a preventive care screening has been delivered or a test has been done is not the best way to measure the quality of ambulatory care, nor the failings between the inpatient and outpatient settings.

¹ See http://www.ajmc.com/media/pdf/AJMC_09May_deBrantes305to310.pdf

² See a complete analysis at <http://bridgestoexcellence.org/Documents/BTE-HITECH.pdf>

³ See http://www.ajmc.com/files/articlefiles/AJMC_08jun_Brantes360to68.pdf

⁴ See http://www.ajmc.com/files/articlefiles/AJMC_08oct_Rosenthal670to677.pdf, and <http://www.commonwealthfund.org/Content/Publications/Issue-Briefs/2008/Jun/Evidence-Informed-Case-Rates-Paying-for-Safer-More-Reliable-Care.aspx>

⁵ S.F. Jencks, M.V. Williams, and E.A. Coleman: Rehospitalizations among Patients in the Medicare Fee-for-Service Program. New England Journal of Medicine 2009; 360: 1418-1428

As a result of this research we have developed a number of programs, we call them CareLinks™, that are designed to measure how well a patient is being managed in a practice (or across settings), and we have been collecting data on these measures systematically, automatically, and relatively easily from various EMR systems installed in practices throughout the country. What some are describing as a far away goal, we are making work today, and in this report are specific examples of this work in the field, the lessons learned and some implications for policymakers as they look at how the HITECH portion of the ARRA should be implemented.

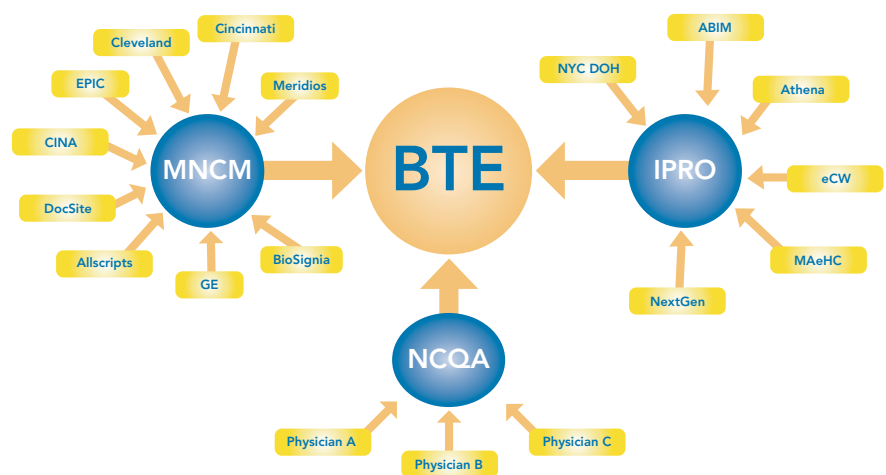
MINI-HUBS AND SUPER-HUBS

In a 2007 paper published in the Journal of Healthcare Information Management⁶, we argued that the nascent health information network in the country could be organized in a way that value would be created for a number of local and national stakeholders. For local stakeholders – physicians and hospitals – information exchange could create the feedback mechanisms and “whole patient views” that are important as pay-for-performance schemes focus increasingly on real patient outcomes. And additional value for these stakeholders could be to facilitate the packaging of information that would be used by regional and national payers to power their incentive programs.

Since then, some health information organizations have started to act as a recognized registry for the CMS PQRI program in addition to feeding back comparative information on performance to their local provider-customers.

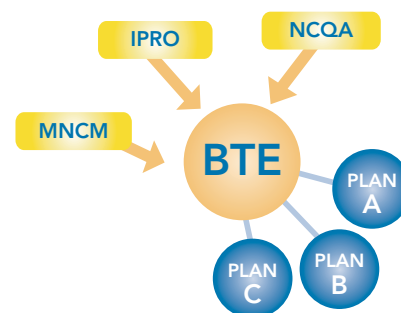
While the private sector payers have mostly harmonized the types of measures that they use for assessing physician performance (helped in part by activities such as the publication of the Patient Charter by the Consumer-Purchaser Disclosure Group), the specific mix of those measures, the weights they assign them, and the performance thresholds that they fix vary significantly from payer to payer, making it far more difficult for local health information organizations to act as an intermediary for their physician-customers. One role that BTE has taken on is to encourage the harmonization of the variables listed above by providing plans with lists of BTE-recognized physicians and making sure that these plans use the recognitions as an important and core part of how they evaluate physician performance. As a result, we’re acting as the equivalent of PQRI for the private sector – although with far more valid measures of quality.

Many of the national and regional plans have accepted BTE’s programs and physicians contracting with Aetna, Anthem-Wellpoint, Cigna, United HealthCare and many others know that they will receive some credit and incentives from these plans if they meet BTE’s quality criteria and become recognized. These charts summarize the concept of the mini-hub/super-hub that we have created to leverage the installation of EMRs in the country and facilitate the reporting of measures for purposes of quality assessment and incentive payments.



⁶ See http://www.himss.org/ASP/publications_jhim_issue.asp?issue=1/29/2007

In this model, each EMR vendor and regional or local health information organization has an opportunity to act as an information intermediary on behalf of its customers. Their role is to prepare the data file extracts that BTE needs to assess physician performance. These data file extracts are then forwarded to one of BTE's Performance Assessment Organizations – IPRO, MN Community Measurement – who assess the quality of physician performance based on BTE's criteria. The assessment is then returned to the intermediary or the physician for feedback, and those who achieve a passing score are then fed into BTE's national database and filtered out to participating plans to power incentives.



SUSTAINABILITY

The key to the sustainability of this and any other model of data exchange is in the value of the process for the paying customers. The more physician compensation is tied to the results of their performance on quality measures, the greater their demand for relevant clinical data from their health information organizations. For example, the ability to harness lab results and prescription fills into the EMR will provide far more information to the physician about the results of care management than not having those data. Similarly, the ability to get a notification of a patient's admission to and discharge from a hospital, the reasons for the hospitalization and other relevant data will greatly help the physician in providing the needed follow-up care that can avoid a re-hospitalization.

The limitations of many of today's P4P programs are that they only put a very small amount of a provider's total compensation at risk for the results of patient management. That has to change for any of our collective efforts to bear lasting fruit. The sustainability of information exchange activities, and the real return of HITECH's investment in the US health care system will largely depend on the necessary changes to current payment models. Private and public sector payers need to significantly up the ante on P4P, getting physicians and hospitals to focus on the performance part of payment from January 1st through December 31st, not simply from December 1st through December 31st. And public and private sector payers need to pilot and learn from different payment models, including (and mostly) episode of care payments.

A TALE OF THREE CITIES

Cincinnati, Cleveland and New York are not just miles apart, but worlds apart. And yet the efforts they have embarked on have similar objectives: the improvement of quality care for their residents. New York's effort is a microcosm of the challenge faced by the federal government. With thousands of small and medium sized practices, many of which have no EMR systems and little capital, the city decided to subsidize the adoption of the eClinicalWorks system with a critical condition attached: physicians who received the software and support services for installation would be required to report a specific set of quality measures into a quality data repository. This condition has not been a barrier to adoption, which suggests that the federal government could be quite prescriptive in its demands for quality reporting as part of the definitions of meaningful use. Cleveland and Cincinnati were both selected to take part in the Robert Wood Johnson Foundation's Aligning Forces for Quality (AF4Q) effort⁷. Their mission, like that of all other AF4Q sites, is to collect, analyze and publicly report quality data. However, contrarily to the other sites, both cities decided to focus on the collection of clinical data from medical records. Cleveland has

⁷ See <http://www.rwjf.org/qualityequality/af4q/index.jsp>

leveraged the significant footprint of the EPIC EMR and decided to start with data from the large provider systems in that city that use EPIC. These systems also have a significant percentage of their patient population that is uninsured or poorly insured, thus providing important findings about the differences in results of patient management by insurance status, race and education level. Cincinnati has the broadest vision for reporting medical record data of the three communities and offers a glide path for how that goal can be practically implemented by leveraging existing EMR installations, the existence of a strong health information exchange (HealthBridge), and offering a direct submission of data through a portal for those that don't have an EMR.

Collectively, the efforts in these three cities offer a blueprint for how quality can be collected, reported and used for various purposes, including informing disparities and fixing them over time. In addition, each has incorporated (or is incorporating) an element of P4P as a core part of their sustainable model, understanding that the enthusiasm of reporting will eventually be dampened without financial incentives to reward high performers and encourage lower performers to improve. All these ingredients are critical to success.

A VIEW FROM THE NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Amid a growing national debate about how to fix the health care system, New York City embarked on a project to create the nation's largest community-based electronic health record (EHR) network. As a mayoral initiative that started in 2005, the creation of the Primary Care Information Project (PCIP) was a step towards a new kind of health care delivery effort that focuses on prevention rather than treatment. Implementing EHRs will allow health care providers to have the 'right information at the right time so they can make the right decisions to save lives.' By helping providers utilize the EHR, thousands of strokes, heart attacks, and early deaths would be prevented.

Many of the leading causes of death and disability today require early intervention and consistent delivery of recommended preventive care. To help providers meet evidence-based care guidelines, PCIP focuses on three areas: (1) information systems oriented toward prevention; (2) changes in care management and practice workflows; and (3) payment that rewards effective prevention and management of chronic disease.

Restructuring primary care to focus on prevention is challenging. Providers have competing practice priorities and are overwhelmed with changes related to EHR adoption. Many of the providers view quality measurement as a burden whose potential benefits are not applicable to their situation. Providers have difficulty seeing the value of managing their patients from a population perspective and worry that data collection or reporting will take time and resources away from seeing patients and will reduce their revenue. Unlike other organizations that have implemented pay-for-performance programs, the DOHMH is not a direct payer and does not have a contractual relationship with providers to enforce best practices or preventive service delivery requirements. At best, the city relies on a social contract and providers' good will to do what's best for the health of New Yorkers.

DESIGNING THE PAY-FOR-QUALITY PILOT IN NYC

With a generous grant from the Robin Hood foundation, NYC is piloting Health eHearts, a pay for quality program with providers that have adopted an EHR. The pilot is a proof of concept for aligning rewards with outcomes and focuses on preventive services targeting providers who typically do not qualify for other pay-for-performance or incentive programs because of the patient

mix they serve (e.g. fewer patients with commercial or private insurers and more patients whose lack of health care access or ability to pay makes them difficult to treat). With input from various interviews and meetings with BTE, other P4P programs, academic researchers, and health advisors, the city selected the following guiding principles in designing the bonus program.

- **Focus on areas of care where substantial improvements are achievable and can lead to averting deaths**

Heart attacks and stroke are the leading causes of mortality in NYC. In New York City alone, more than 750,000 are in danger of heart attack or stroke due to uncontrolled high blood pressure. In 2006 nearly 5,000 deaths were attributed to a stroke or heart attack. There is substantial room for improving care for patients with hypertension and high cholesterol. Rates from national reports indicate only 53 - 62% of hypertensive patients have their blood pressure treated to goal. New York rates are similar and in some cases lower in neighborhoods with higher prevalence of hypertension and high cholesterol.

- **Reduce disparities by rewarding all efforts**

Payment method should encourage the provider to treat all patients within the practice that meet the recommended prevention goals, regardless of insurer or type of insurance. Payment is not contingent on meeting a threshold. Most pay for performance programs only reward the top performers or rank providers and only pay for practices over a specific benchmark (e.g. 75th percentile and above). This may inadvertently widen the gap for lower performers as they are discouraged and assume they will never meet the threshold performance for payment.

- **Pay more for patients that are more difficult to treat**

A concern with paying by numerator is that physicians will avoid spending more time with patients that may require more time or effort to meet recommended goals. Paying more for patients that are more difficult to treat (e.g. co-morbid conditions, difficulty in paying or accessing health care), encourages providers take the time and efforts needed to treat difficult patients as the reward is greater.

- **Bonus amounts must be meaningful to physicians**

Several papers in the literature have cited that providers will act on bonuses if they perceive the financial reward is commensurate to their efforts. The literature estimates 5-10% of a provider's revenue would make bonuses meaningful and drive efforts to participate.

- **Recognize providers for participating**

Because the NYC DOHMH is neither a direct purchaser nor payer of health services, the relationship with providers relies on a social 'contract' for the general welfare of public health. For some providers, public recognition for 'doing good' is a meaningful reward.

- **Provide timely and actionable information**

Many of the pay-for-performance programs that have demonstrated improvements in targeted areas have provided patient lists so that providers can act on areas needed for improvement. In addition to the point of care reminders and quality reporting tool available in the EHR to providers, DOHMH will be sending quarterly reports to participants that shows their performance to date, citywide averages with 'like' providers or practices, and follow-up visits from quality improvement specialists.



NYC HEALTH EHEARTS

The Health eHearts pilot includes 97 non-hospital based adult primary care practices using a certified EHR. Health eHearts focuses on a core set of cardiovascular health care measures, collectively known as the “ABCS” (Aspirin, Blood Pressure Control, Cholesterol Control, and Smoking Cessation). These categories were chosen for their potential to have a large impact on morbidity and mortality in NYC. Research suggests that 1,500 deaths could be averted if 500 providers scored 80% on each of the measures for 10 years (unpublished data).

Health eHearts will recognize all practices for their participation, their hard work, and their commitment to providing excellent heart health through press releases, a year-end ceremony, and other events. Participating Community Health Centers and a certain number of randomly selected small practices will receive quality payments. Payments are based on per patient meeting the ABCS quality goals. To be an eligible trigger of payment, patients need to have been seen at least by the practice between January 1, 2009 and December 31, 2009. Practices enrolled in the program were required to have adopted and been ‘live’ on the EHR for at least 1 month prior to January 1, 2009 or have at least 100 patients eligible for the ABCS measures. Exhibit 2 shows the payment schedule for practices that were randomized to the quality payment group.

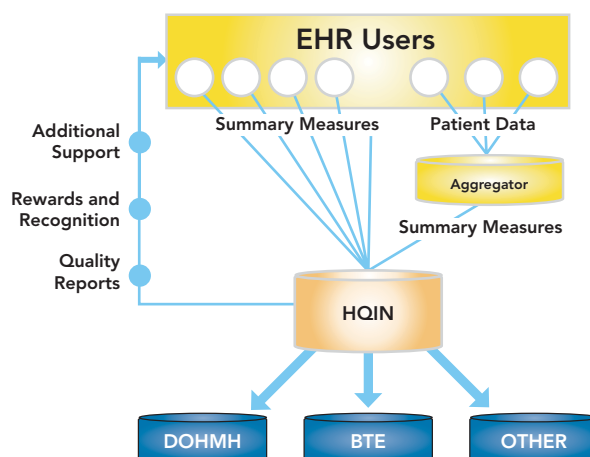
Exhibit 2. Payment schedule for the Quality Payment Health eHearts practices

	Base Payment	Payment for High-Risk Patients		
	INSURANCE: Commercial CO-MORBIDITY: No IVD or DM	QUALIFYING INSURANCE: Uninsured Medicaid	QUALIFYING: CO-MORBIDITIES: IVD or DM	QUALIFYING INSURANCE AND CO-MORBIDITY: Uninsured/Medicaid AND IVD/DM
Aspirin	\$20	\$20	\$20	\$20
BP Control	\$20	\$40	\$40	\$80
Cholesterol Control	\$20	\$40	\$40	\$80
Smoking Cessation	\$20	\$20	\$20	\$20
<i>Total Possible Payment if Patient Meets All Targets</i>	\$80	\$120	\$120	\$200

DATA SOURCE FOR HEALTH EHEARTS

In conjunction with quality reporting, PCIP developed a data warehouse called the Healthcare Quality Information Network (HQIN) to receive transmissions from EHRs capable of reporting quality metrics. Currently, there are two models of data aggregation in use for reporting to HQIN. The first is a federated model, where the aggregation occurs at the level of the practice's individual EHR. The five small circles in the top left corner shown in Exhibit 3 represents the software for quality reporting that practices use. In this example, practices can view their reports prior to transmitting to DOHMH. The second is a third-party aggregation model, where practices upload patient level information to a data repository and a data vendor aggregates the information into summary quality measures to transmit to HQIN.

Exhibit 3. Healthcare Quality Information Network (HQIN)



ABOUT THE PRIMARY CARE INFORMATION PROJECT (PCIP)

The PCIP was created as a mayoral priority initiative in 2005 and seeks to improve population health in disadvantaged communities through health IT. The City of New York contributed \$30 million in start-up funds, and PCIP leveraged an additional \$28 million from state, federal, and private sources. As an EHR extension program, PCIP assists practices with installation, training, providing technical support to help optimize use of the EHR. Practices that receive the software license subsidies purchase their own hardware and other IT infrastructure. Practices pay \$4,000 per provider for 2 years of technical assistance and contribute in-kind contribution staff time and some lost productivity during the implementation of the EHR. As of May, 2009, PCIP has recruited 1,800 providers to adopt the TCNY EHR, of which 1,256 had successfully completed EHR-implementation. By 2010, PCIP expects to extend the TCNY EHR to 2,500 providers, reaching 2 million patients. For more information, visit: www.nyc.gov/PCIP

ABOUT ROBIN HOOD FOUNDATION

Since 1988, Robin Hood has targeted poverty in New York City. By applying sound investment principles to philanthropy, Robin Hood has supported the best programs to save lives and change fates. The foundation gives every cent of every donation directly to programs helping poor New Yorkers and focuses on attacking the source of poverty at its roots. For more information, visit: www.robinhood.org

APPENDIX. QUALITY MEASURES AVAILABLE IN ECLINICALWORKS SOFTWARE CO-DEVELOPED WITH PCIP

“Take Care New York” Adult Quality Indicators (Core measures relevant to Health eHearts program in bold)

TCNY ALERT	TCNY MEASURE	(PATIENT POPULATION)	IN THE LAST...
1. REGULAR DOCTOR			
Patients see assigned PCG	Seen by assigned Primary Care Giver	(all adults)	12 months
2. TOBACCO			
Smoking status	Smoking status updated	(all adults)	12 months
Smoking cessation intervention	Received counseling, meds or Fax2Quit	(Smokers)	12 months
3. CARDIOVASCULAR HEALTH			
Body Mass Index	BMI measured	(all adults)	2 years
Cholesterol screen (genl pop)	HDL & Total Chol measured	M35+F45+, no DM/IVD)	5 years
Cholesterol control (genl pop)	Chol <240 (no LDL) or LDL <160	(M35+ F45+ no DM/IVD)	
LDL testing (high risk)	LDL screened	(Patients with DM or IVD, 18-75)	12 months
LDL control (high risk)	LDL <100	(Patients with DM or IVD, 18-75)	
BP Control in HTN (140/90)	Last BP<140/90	(Patients with HTN but not IVD/DM)	
BP Control in IVD (140/90)	Last BP<140/90	(Patients with IVD but not DM)	
BP Control in DM (130/80)	Last BP<130/80	(Patients with DM, 18-75)	
A1C testing	A1C test	(Patients with DM)	6 months
A1C control (<7%)	Last A1C<7.0%	(Patients with DM)	
Antithrombotic tx (IVD or DM)	Currently on aspirin or other antithrombotic	(DM or IVD)	
4. HIV			
HIV screening	HIV test	(18-64)	
HIV viral load and CD4 testing	Viral load or CD4 test	(HIV+)	3 months
5. DEPRESSION			
Depression screening	Negative PHQ2 or any PHQ9	(all adults)	12 months
Depression follow-up	Reassessed	(PHQ9 10+)	w/in 3 months
Depression control	New score <10	(PHQ9 10+)	
6. SUBSTANCE ABUSE			
Alcohol use screening	Alcohol use screened – AUDIT-C	(all adults)	12 months
7. CANCER SCREENING			
Colorectal cancer screening	Colonoscopy (procedure)	(50-80)	10 years
Breast cancer screening	Mammogram (procedure)	(F40+)	2 years
Cervical cancer screening	Pap smear (lab)	(F18 – 64)	3 years
8. IMMUNIZATIONS			
Influenza vaccine (high risk)	Flu shot Sept-March	(18-49, high risk)	Since last Sept.
Influenza vaccine (over 50)	Flu shot Sept-March	(50+)	Since last Sept.
Pneumococcal vaccine	Pneumococcal shot	(65+ or high risk)	5 years (Once after 65)
9. ENVIRONMENTAL HEALTH			
Asthma symptom assessment	Evaluated for symptom freq	(18-56 with asthma)	12 months

BETTER HEALTH, GREATER CLEVELAND (BHGC)— AN ALIGNING FORCES FOR QUALITY PROGRAM COMMITTED TO ELIMINATING DISPARITIES



BHGC is a multi-stakeholder collaborative and one of 14 regional market initiatives supported by the Robert Wood Johnson Foundation's Aligning Forces for Quality program to improve the care and outcomes of patients with chronic medical conditions. Formed de novo in early 2007, the backbone of the initiative is outpatient practice-level performance measurement and public reporting of nationally endorsed and locally vetted standards, beginning with diabetes. Clinical partners include over 50 group practices in Greater Cleveland, including virtually all safety net practices alongside systems and patients with substantially greater resources. From the outset, the partners committed to measuring and reporting the care and outcomes of all of their patients seen at least twice during a 12-month measurement period, with regional reports stratified by insurance (including the uninsured), race (white, black, Hispanic, and other), and estimated educational attainment and household income. The achievement of practice sites by insurance is reported for sites with at least 50 patients in a given insurance category (Medicare, Commercial, Medicaid, and self-pay/uninsured). Vital parallel initiatives in region-wide Quality Improvement and Patient Engagement are data driven, motivated by and integrated with regional and practice site-level achievement as well as disparities in achievement and improvement over time.

Better Health's opportunity to identify and commit to eliminating disparities results from comprehensive and timely practice-level reporting, which in turn is a result of the widespread adoption of electronic medical records in Greater Cleveland. The vast majority of our clinical partners, including physicians in Ohio's largest safety net system, work in organizations that are mature users of the same commercial EMR system. The paper-based practices include the sites of all of the region's Federally Qualified Health Centers, each of which has used patient-level registries through their longstanding involvement in the national Health Disparities Collaborative. Using a federated approach for data aggregation, all systems provide data to a central data-coordinating center, with data de-identified at the patient and physician levels. To obtain uniform estimates of patients' education and income, each system uses computer software for geo-coding each patient and linking his/her location to the U.S. census for estimating neighborhood educational attainment and household income. These estimates then are attached to each de-identified patient's file and securely shared with the data-coordinating center.

In less than two years, Better Health has published two public reports⁸ (covering calendar year 2007 and mid-2007 through mid-2008, respectively) and is about to release its third "Community Health Checkup" (calendar 2008). Given the short time interval between the reports, our results have demonstrated surprising region-wide improvement in both Care and Outcomes (Figure 1), including among sub-groups by race, income, and education, as well as providing data for sharing best practices at the practice site and health care system levels (Figure 2). At the same time, however, we have identified continued disparities in Outcome achievement among those with fewer resources in Greater Cleveland. Safety net practices and those using paper-based medical records continue to do less well than more advantaged practices. Likewise, we have observed poorer Outcomes among non-white and poorer patients as well as those with lower educational attainment. Perhaps most challenging are poorer Outcomes among our uninsured patients, whose achievement was both lower than insured patients and showed no improvement over the two year long measurement

⁸ See <http://www.BetterHealthCleveland.org/>

periods (Figure 3). As Greater Cleveland moves rapidly towards unemployment levels of 10% in 2009, our clinical partners certainly will be caring for more patients who lack adequate health insurance in the foreseeable future. While there are no easy solutions to the resulting disparities, Better Health's commitment and practice-level capacity to measure these critical problems will keep their relevance front-and-center for providers, public health advocates, and policymakers both in the region and throughout the U.S.

Figure 1. Change in Achievement of Process and Outcome Standards from calendar year 2007 through mid-2008. Data pertaining to over 23,000 diabetic patients cared for by 322 physicians in 30 sites of systems with EMRs.

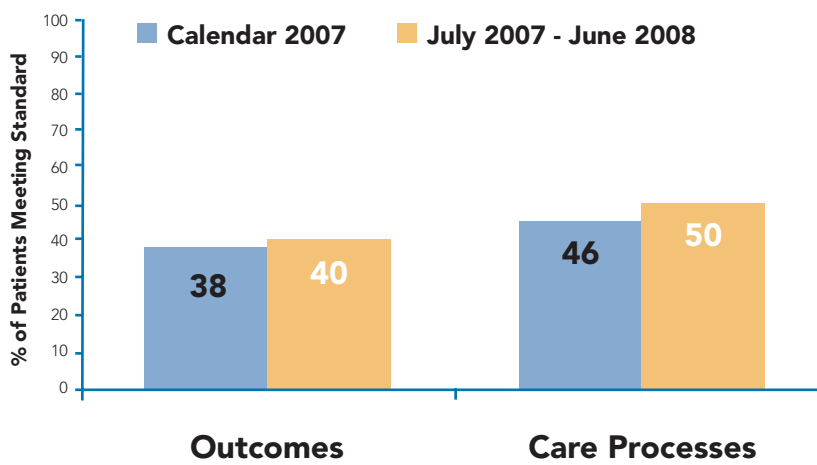


Figure 2. Pneumococcal Vaccination Rates Among Diabetic Patients Across 35 Clinical Sites. Nine of the top 10 practice sites were from one health care system, which had used its EMR to improve its system-wide rates from about 25% to over 85% in 3 years. The specific “best practice” protocol was publicly shared across all partner systems.

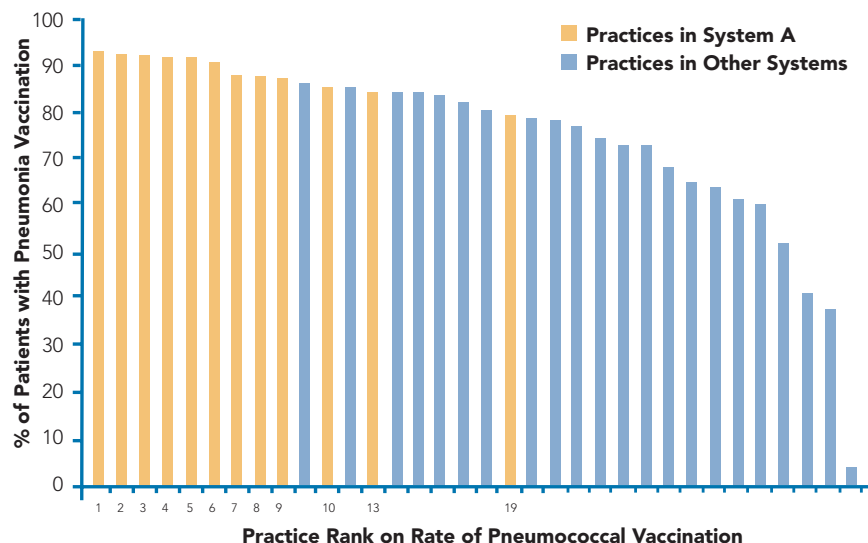
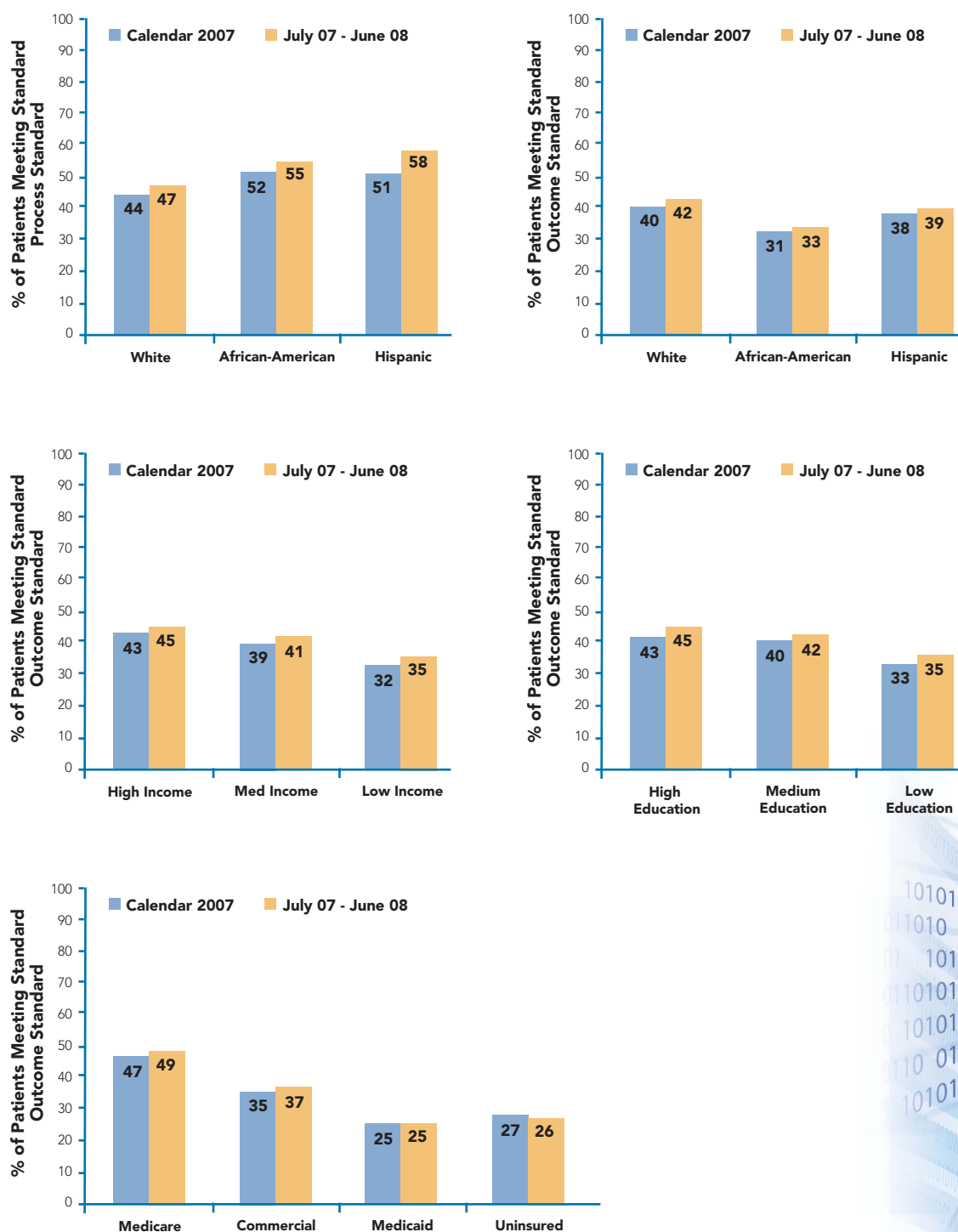


Figure 3. Disparities in Outcomes Across Diabetic Patients in Specific Sub-groups. African-Americans, poorer and less well-educated patients had lower levels of achievement on our Outcome standards, although they improved over the two measurement periods. Medicaid and uninsured patients fared worse than did the commercially insured and Medicare patients, and no improvement was observed over the two periods



ALIGNING FORCES FOR QUALITY OF GREATER CINCINNATI

BACKGROUND

Performance measurement is a cornerstone of the national effort to modernize the US health sector. Measurement is posited to facilitate two key functions, both of which are necessary to support and accelerate improvements in care for populations. First, providers require rapid cycle feedback loops on key indicators to test quality improvement interventions and monitor progress over time. Second, consumers, purchasers and referring clinicians need performance information for making informed selection decisions and identifying the best possible provider for specific patients and conditions.

Berwick and colleagues describe these functions within the context of a health information management model comprised of an improvement pathway and a selection pathway, with the latter pathway providing motivation for robust application of the former (Berwick, James & Coye, 2003).

TWO PATHWAYS TO QUALITY IMPROVEMENT

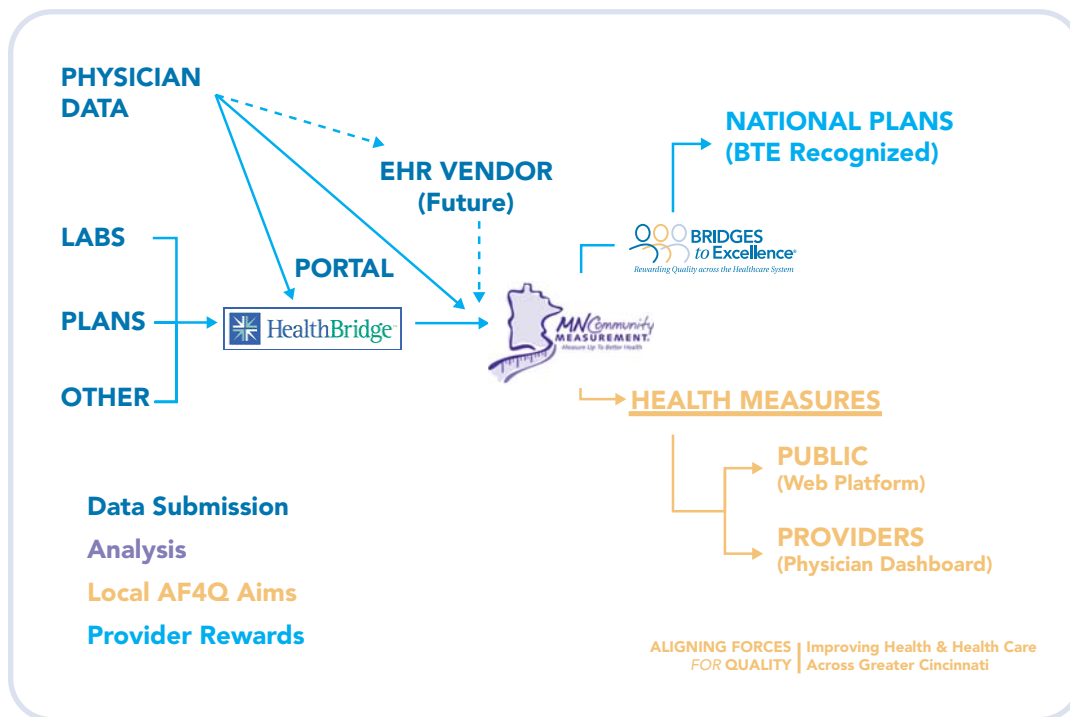


Dr. Brent James suggests, “Properly designed, a data system built to support front-line clinical process management and improvement can also produce data for summary reports that support accountability, selection and motivation.”

THE WORK UNDERWAY IN CINCINNATI

The Greater Cincinnati region is aggressively pursuing the dual aims of helping physician groups use data to improve clinical performance, while also aggregating data for selection, accountability and pay-for-performance. This work is part of a broad regional strategy that leverages both the Robert Wood Johnson Foundation’s Aligning Forces for Quality program and AHRQ’s Chartered Value Exchange effort.

Community leaders in Cincinnati—providers, health plans, employers and consumer organizations—are fully committed to measurement, but feel strongly that clinical data should be used to the greatest possible extent.



Rather than invest in local analytic infrastructure, Cincinnati leaders elected to contract with Minnesota Community Measurement (MNCM)—a leader in the field of performance measurement using clinical data. This represents the first time that MNCM's full suite of data aggregation and analytic technologies has been exported to another community. A partnership with Bridges to Excellence allows participating physicians to be scored for numerous pay-for-performance incentives.

Importantly, Cincinnati is home to one of the nation's leading Health Information Exchanges—HealthBridge. Work is currently underway to leverage this community asset for extraction of electronic health record data for measurement. This is challenging work, as EHRs are generally not configured to export the de-identified patient-level clinical data necessary for measurement.

We find that physicians embrace the idea of submitting clinical data, both for selection (e.g., accountability and payment incentives), and for a more robust analysis of individual performance to support their improvement aims. The major barrier, however, is the time and expertise required to export their data and organize it for submission. *A machine-to-machine, EHR-HIE interface that automates this process has high potential for increasing the number of providers engaged in measurement.*

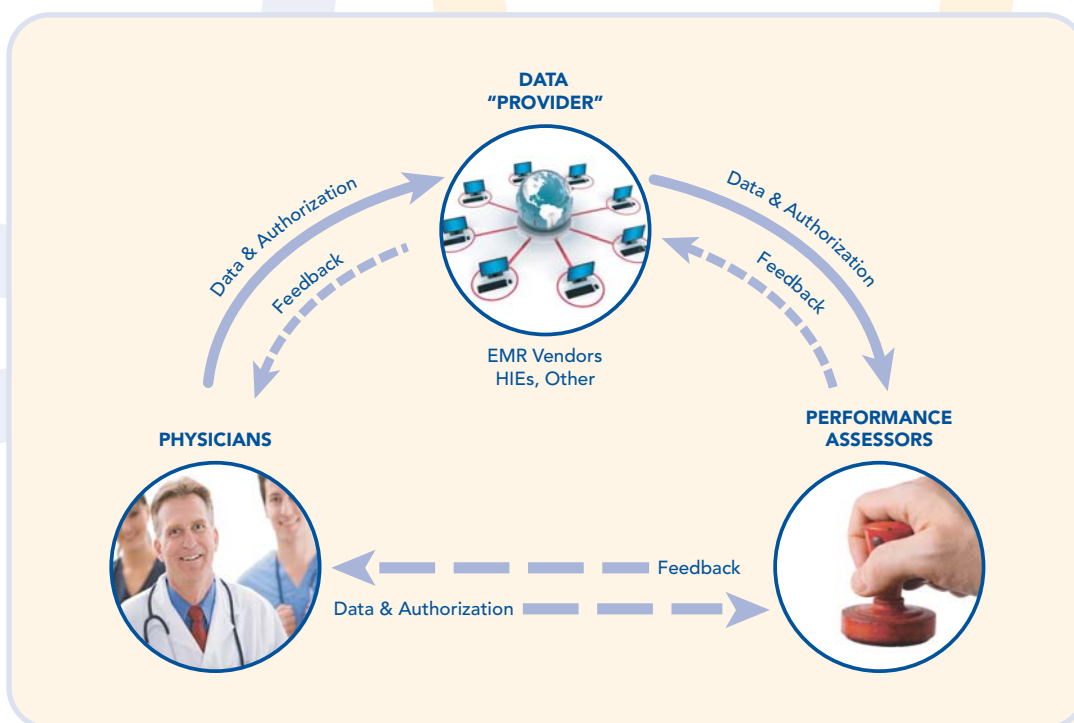
As discussions unfold regarding technology's "meaningful use," we believe two things are essential for accelerating measurement and quality improvement in markets like Cincinnati. First, EHRs should more easily be able to export patient-level data for third-party analysis. Second, HIEs should be able to readily receive these data and serve as data aggregators for third-party analysis. Demonstration projects that test this approach will be important for informing the national dialogue linking quality improvement with health information technology.

TRUSTED MEASUREMENT

The projects from these three cities also illustrate the critical need for a trusted third party to analyze and measure the performance of physicians. This intermediary role is needed for all parties. Physicians must have confidence that their data will not be “used against them”, and that they will always have an opportunity to thoroughly review the results of the measurement process, understand the scores and, ideally, have an opportunity to improve before the results become public.

Similarly, employers and health plans must have confidence that the analysis of the data and the resulting measurement and scoring are done rigorously and accurately reflect the quality of care delivered to patients. This is especially important if the results of the measurement are to be tied to financial incentives. And that’s why BTE turned to the NCQA, Minnesota Community Measurement and IPRO to be the trusted third party performance assessment organizations for its programs.

As EMR deployment accelerates, medical record extracts that are needed for performance measurement will be flowing from all over the country to these three organizations, and other intermediaries. As a result, and in working with these organizations and EMR vendors, BTE has created a series of rules and processes to ensure that data are comparable, measurement is consistent, and results are accurate.



THE BTE PERFORMANCE ASSESSMENT PROCESS

It starts with clear definitions for the measures in our CareLinks, all of which are specified in a policies and procedures manual. The role of the data intermediary (EMR vendor, HIE, Health System) is then to build report queries to extract the data elements that are needed for each measure (e.g. date of birth, last visit date, A1C value, Blood Pressure). Our Performance Assessment Organizations then perform a certification of the numerators and denominators that result from the queries. This certification is an essential step because it assures the validity of the query, in particular the patients pulled in.

The intermediary then submits a test file to validate the adequacy of the file formats and that all the data elements are being reported in the right order and within the specified ranges. If the file formats and the numerator/denominator pairs have passed the test, the intermediary will then be approved for data submission. This approval is program specific. As such, some intermediaries might be approved for one program while others can be approved for all programs.

At the end of each calendar quarter, the intermediary will then extract and aggregate data on all eligible patients for participating physicians. As a rule, the reporting period is 12 months back from last day of the calendar quarter. This assures us that we are seeing the most recent data on the physician's performance, and that the patient has been seen by the physician within the last twelve months.

Our Performance Assessment Organizations (PAOs) then validate the data submitted by making additional denominator checks and the ranges of measure values. If any errors are found, the file is returned to the intermediary with explanations and the process is repeated until the PAO is satisfied with the validity of the file. And since BTE pays the PAOs for this process, and the PAOs do not receive any money from the intermediaries, there is no potential for conflict of interest. The goal is rigorous and fair assessment of physician performance.

The final file is processed for scoring, and 5% of any physicians newly submitted through this process are automatically audited and their recognitions are pended until the results of the audit. Once the scoring is completed, the intermediary is notified that the results are available for review and retrieval. The intermediary's role is then to share the results with the physicians, and for physicians who achieve a passing score, their results are then transmitted to BTE's Recognition Data Exchange for processing and monthly transmittal to participating health plans.

While this process might seem cumbersome, it takes less than a month from submission to recognition once the intermediary has been approved for submission. Physicians get quarterly reports on their performance and have an opportunity to continuously improve their performance. Plans get the updated recognitions on physicians monthly as well, ensuring that what they are rewarding is today's performance, not that of two or three years ago. It's accurate, reliable, and timely.



MN COMMUNITY MEASUREMENT—LEADER IN CLINICAL DATA COLLECTION FOR QUALITY MEASURES

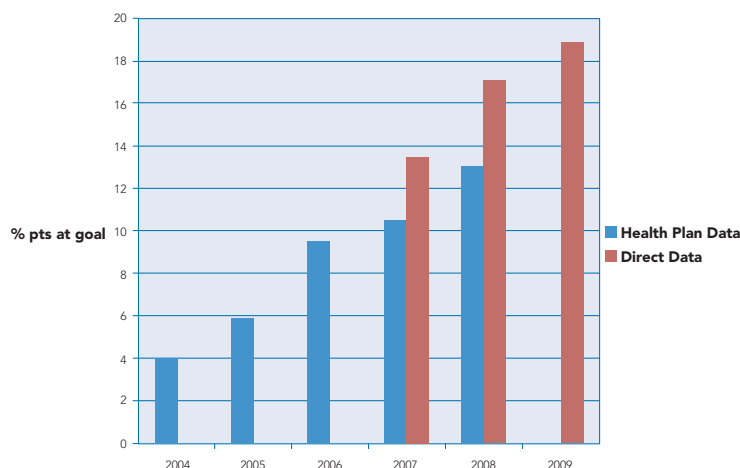
MN Community Measurement, a community collaboration that supports health care quality measurement and reporting in Minnesota, has been collecting clinical data for diabetes and vascular disease measures since 2002 as part of the local health plan HEDIS process. The challenge was that the community needed more data in order to measure results at the practice level where change and improvement in results can actually occur. Large amounts of administrative data were available from the health plans, but this information lacked the clinical results that were most actionable by the providers to improve quality. Sending health plan chart auditors out to each location to collect additional clinical data was prohibitively expensive. In response, MNCM approached the medical groups about submitting their own data. Since the results would be widely used in the community for public recognition and incentive payments, MNCM had to develop methods to efficiently collect comparable data and ensure its reliability.

MNCM worked with medical groups to develop standardized data collection specifications for the measures and developed a web portal that provided training on data submission, certified eligible patients for the measure, allowed efficient uploading of the data from electronic medical records or registries, and gave immediate feedback on errors and results. MNCM also developed an audit process that allowed remote verification through web cast technology that was fast, efficient and secure.

MNCM now receives direct clinical data from 70 medical groups with 426 sites of care across the state. The diabetes measure includes data from groups with over 178,000 patients or more than 80% of all diabetics in treatment in the state. In the last 5 years, the percent of diabetic patients in the state achieving optimal care has more than tripled, which means thousands of fewer serious complications from this disease, fewer strokes, fewer heart attacks, fewer amputations, and fewer vision problems.

MNCM is now using its processes and technology to support other communities in submitting and assessing clinical data from provider groups. In 2009, MNCM will be assessing data from at least 6 other communities as a Bridges to Excellence Performance Assessment Organization. MNCM hopes to play a role in demonstrating efficient methods of generating quality measures from electronic medical records as this technology is spread to practices across the county.

MINNESOTA OPTIMAL DIABETES CARE MEASURE



IPRO—QUALITY IMPROVEMENT AND PERFORMANCE MEASUREMENT



BACKGROUND OF INITIATIVE

In order to encourage participation in voluntary performance measurement and recognition programs such as Bridges to Excellence (BTE), the administrative barriers of participation need to be minimized. After the necessary patient-level data is generated, participating providers should be able to easily obtain real-time scoring of their data. This should be true whether the necessary data elements are pulled by their EMR vendor, such as NextGen; were previously submitted to another program for related purposes, such as the American Board of Internal Medicine's Maintenance of Certification Program; or generated by the physician directly for the purpose of the measurement and recognition program.

SOLUTION IMPLEMENTED

In order to facilitate easier participation in the BTE programs, IPRO developed a Web-based solution for real-time scoring of data for BTE's Cardiac Care Link and Diabetes Care Link programs. The Web portal accepts data from multiple sources. From the ABIM Web site, physicians who submit data to an ABIM Practice Improvement Module can just click a button to choose to submit that same data for BTE recognition. They are redirected to the IPRO/BTE portal, which can pull data directly from the ABIM servers, and score it for BTE recognition within seconds. Likewise, EMR vendors such as NextGen can upload data from their physician practice sites, and get real-time scoring of their practices' performance. Physicians who wish to submit data directly can do so by uploading a file using a standard spreadsheet template that IPRO provides.

IPRO's web solution was built using an entirely open source solution stack: RedHat Linux operating system, apache Web server, MySQL relational database management system, and PHP scripting language.

LESSONS LEARNED

The transmittal format of quality data is yet to be standardized. Wherever possible IPRO implements standards such as the HL7 Quality Reporting Data Architecture, but it is vital that the entire sector quickly embrace a standard upon which to build future interoperability. Additionally, interoperable data and underlying systems will close the gap between EMR systems and their eRx and Labs counterparts, allowing a finer grained and more accurate quality measurement. As it stands, adoption of EMRs does not mean better access to data, as many data elements are available only through non-standard data entry or free-form entry within the record, effectively hiding it from the network at large.

IMPLICATIONS FOR THE COUNTRY

In order to maximize the benefits of EMR adoption, it is critically important to use electronic medical record data for quality measurement and improvement purposes. Our project demonstrates that using standardized data extracts, one can build a customized solution to apply a real-time quality assessment process to data coming in from multiple sources. The solution is cost-effective, and is easily modifiable to allow for different rules for quality assessment. Therefore, in addition to supporting national projects, this model can be used to support local and regional priorities for quality improvement.



AN EMR IS AN EMR, RIGHT?

While there are dozens of electronic medical record systems available to physicians throughout the country, only a few of them are certified by the Certification Commission for Health Information Technology (CCHIT), an important marker that the critical functionalities that should be in an EMR are there.

Like many complex software applications, an EMR has many customizable features to meet the needs of its user. A smaller practice may not need some of the more complex features that a larger practice needs. Some systems may be fully integrated with the practice's billing system, while others are not. Some have certain quality measures baked in as prompts, while others might simply have clinical reminders of screening or tests. A pediatric practice might be interested in asthma management decision support, but not in congestive heart failure. Any effort to leverage the adoption of all the possible variations of EMRs in all practices must be sensitive to these variations, and yet rigorous about the types of data needed for performance measurement. Our work to-date with many vendors suggests that they can be very important information intermediaries for their customers. Creating a standard reporting template might be sufficient to provide the physician with a timely internal feedback mechanism on their current performance, but not sufficient for our purposes. That's because we need to be certain that the exclusion rules used by one are the same as another, that the patients brought into the numerator are the same across practices, and that the values reported fall within an expected range.

Allscripts, CINA, GE, and NextGen are just four examples of organizations that have agreed to take on this important intermediary role and facilitate the reporting of comparable data from site to site, physician to physician, in order to help their customers apply for BTE recognition and qualify for incentives. We're also actively working with Athena Health, BioSignia, DocSite, ...to broaden the reach to tens of thousands of physicians across the country and usher in a new era of transparency and quality improvement.

ALLSCRIPTS—IOWA HEALTH IMPROVES QUALITY MEASUREMENT USING EHR DATA



As pressure mounts to deliver higher quality patient care at lower cost, forward thinking health care organizations are turning to information technology for a solution.

As these organizations have discovered, consistency of care across a complex delivery system can be more easily obtained through health care information technologies such as the Electronic Health Record (EHR) that support point-of-care decision support, as well as after-the-fact auditing and reporting to evaluate outcomes and performance.

One such organization is Iowa Health System, the state's first and largest integrated health system with nearly 20,000 employees, 11 large hospitals, 14 rural hospitals and more than 1.8 million patient visits. Iowa Health System utilizes the analytics module of its Allscripts Enterprise EHR, deployed in 120 clinics across the state, to enable physicians and other caregivers to proactively manage populations of patients, monitor their own outstanding orders and reach out to patients who need care. Allscripts enables physicians and Iowa Health System administrators to access the data collected by the EHR in a format designed for near real-time decision-making.

"The electronic health record allows me to manage my patients with chronic and preventive health needs in a more efficient and effective way," said Tim Winters, M.D., a family physician in Iowa Health's Marion Family Practice Clinic. "Most critically, the EHR supports proactive management of clinical conditions through the identification of patients that are near due or over due for care. With this information I can reach out to my patients and bring them in for the care they need to achieve their healthcare goals."

Identifying individual patients and patient populations for disease management is a prerequisite for health promotion and health care cost reduction. Iowa Health System has leveraged that capability for diabetes, asthma and hypertension diagnoses' monitoring. By capturing discreet data within the EHR, Iowa Health System clinicians can measure performance and support their efforts in improving patient care.

Allscripts makes the process easy by reporting key performance indicators and clinical trends – such as blood pressure readings for hypertensive patients or breast, cervical and colorectal cancer screening rates. Senior executives can access high-level clinical information across the physician network and can evaluate when key indicators fall out of range. Clinical operations have summary information on their desktop and can also view clinical measures such as health maintenance and provider productivity.

"The ability to provide performance data to our clinicians on key indicators is essential to our success," said Bill Leaver, President and Chief Executive Officer of Iowa Health System. "The use of analytical tools, like those available in the Allscripts Electronic Health Record, supports Iowa Health System's Vision of delivering the Best Outcome for Every Patient Every Time by identifying practice excellence and opportunities for improving the delivery of health care."

Joy M. Grosser, Iowa Health System's Chief Information Officer, added: "The ability to produce quality reporting has become paramount to health care organizations and a common request when selecting new software applications. The capture of discreet data within the EHR allows our clinicians to accurately measure their own performance and supports their efforts in improving patient care – critical activities that were nearly impossible to accomplish with the old paper medical chart."



DRIVING QUALITY THROUGH GE HEALTHCARE'S MEDICAL QUALITY IMPROVEMENT CONSORTIUM

THE MEDICAL QUALITY IMPROVEMENT CONSORTIUM

GE Healthcare's Medical Quality Improvement Consortium (MQIC) was started in 2003 with the major goal of helping its members improve quality of care through the use of aggregated health care data. Membership in MQIC is open to all users of GE's Centricity Electronic Medical Record (EMR). For participating members, EMR data are extracted, de-identified and sent to a central data warehouse. In the warehouse, data are cleaned and staged, and used to create quality reports that members access through a web portal, as well as directly through the EMR. Members can view the quality information as a dashboard, and can use it to manage populations of patients. This dashboard view is demonstrated in Figure 1.

Additionally, MQIC members can electronically send quality information to various third parties, including Bridges To Excellence (BTE), CMS (in support of the PQRI program), and the National Committee for Quality Assurance (NCQA). Depending on the program, MQIC is able to send either summarized patient level data or pre-computed measures at the physician level.

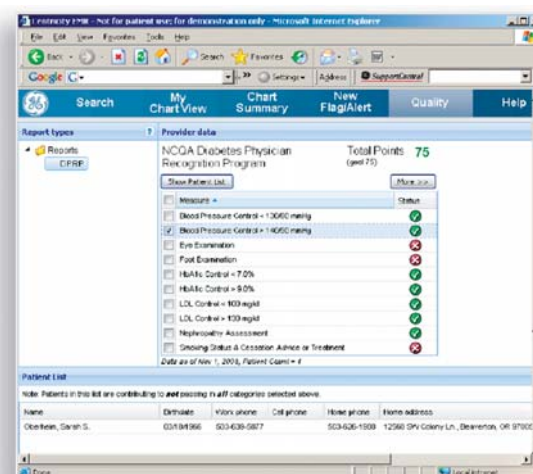
This process creates a closed loop of quality measurement, quality reporting, and quality management.

AUTOMATING QUALITY REPORTING

Starting in 2008, GE Healthcare has been working with BTE to implement an electronic continuous quality reporting system to support BTE's Diabetes Care Link (DCL) program. The goal of the program is to automate the data collection and submission process necessary for monitoring the quality of diabetes care being provided by participants. Rather than having to manually abstract data from a chart, or enter data into specific fields in a registry, participants can use the EMR in their usual fashion, providing care for their diabetic patients. Though, that standard workflow does provide enough structured data to support quality reporting.

The flow of data in the program is demonstrated in Figure 2. Data is originally captured in the EMR during routine clinical care. The EMR can have clinical decision support to assist the physician in providing high quality diabetes care. Next, the data are extracted, cleaned, and normalized as part of the process of being imported into the MQIC data warehouse. MQIC members can then use reports generated from the data to monitor their care and manage their diabetic patients. On a quarterly basis, summarized de-identified patient-level data is sent to Minnesota Community Measurement (MNCM), a performance assessment organization (PAO), to score the data for the DCL program. MNCM then sends the scores back to GE Healthcare/MQIC, and those reports are distributed back to the program participants. MNCM also forwards the names and level of recognition for each physician that has met at least the first recognition level for diabetes care to BTE. Payers then gain access to that list, and can provide incentives in number of different ways for physicians who achieve recognition.

Figure 1. Quality Dashboard in Centricity EMR



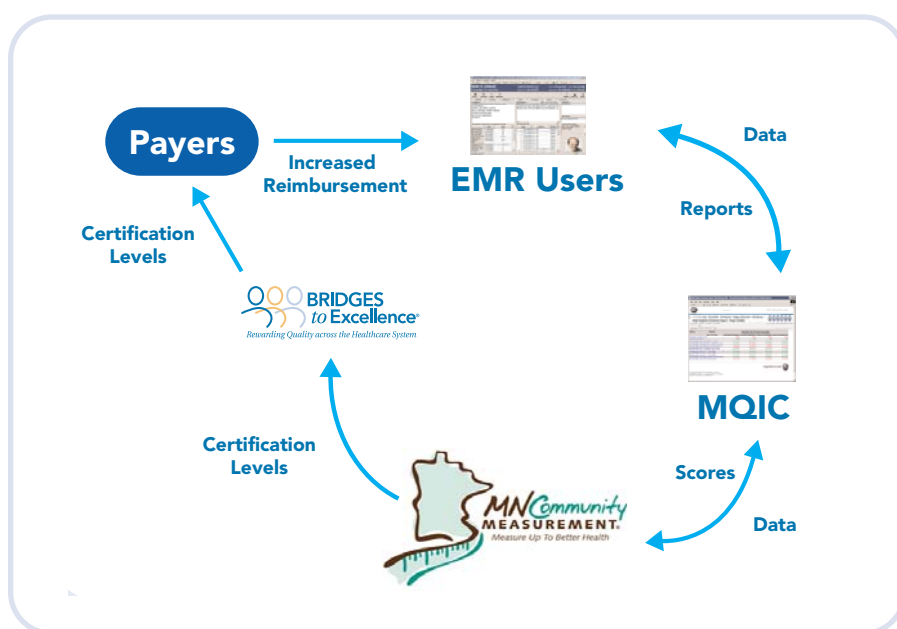
The program has now been active for over six months, and we have successfully reported on three quarterly data periods. Part of the process involves auditing 5% of the physicians applying for recognition. Due to the nature of the EMR, each audit has been conducted virtually via web conference, and has been completed successfully. Over two-thirds of the participating physicians with enough patients to qualify for the program achieved recognition with over one-third achieving advanced levels.

CONCLUSION

In this project, GE Healthcare, Bridges To Excellence, and Minnesota Community Measurement have demonstrated the ability to use passively collected EMR data to measure clinical quality in a continuous manner. In looking forward to widespread adoption of healthcare information technology, it is important to maintain flexibility in defining how systems should meet the requirements of reporting in support of quality measurement and improvement. In particular, it will be important to allow and support submission of either patient level or population-level quality data from EHRs or EHR/data warehouse combinations. In this specific example, we were able to use an existing set of tools and services to facilitate quality reporting for both internal and external purposes. The use of the same tools for internal management and external reporting, via the registry-like capabilities of MQIC, added greatly to the efficiency and effectiveness of this approach. The comments of one of the participating physicians summarize the overall experience well:

“This program is a great example of leveraging the power of an electronic medical record (EMR). Prior to this time, this data had to be entered manually, taking it off one computer (the EMR) and entering it into another (Bridges to Excellence). Now we clinicians stay focused on providing good patient care and the computers “talk to each other”, taking over the data submission behind the scenes.”

Figure 2. Data Flow



NEXTGEN—SOLUTIONS TO ENABLE THE “ONE AND DONE” REPORTING

Increasing focus on outcomes makes treating the whole patient more relevant than ever. Moreover, outcomes reporting should not be a burden but a natural byproduct of using an EHR. Quality reporting should be transparent and automatic, allowing the physician and practice staff to focus on the patient, not the process. As such, automated quality measurement and outcomes reporting are natural extensions of an EHR reporting capabilities. NextGen has implemented these features through its integrated Health Quality Measures Reporting Module which is a clinical data warehouse for complete, verifiable and automatic registry reporting of outcomes measures. Through automated processes the module mines discrete data elements from NextGen EHR applications and provides an easy to use centralized mechanism for calculating and reporting discrete and aggregate outcomes data. This technology enables NextGen's clients to meet the federally mandated outcomes reporting requirements defined in ARRA and has opened up a wide range of services they can offer physicians as a registry, data aggregator and repository for research opportunities.

During the course of these efforts, NextGen created a crosswalk of over 12 National and regional outcomes programs such as; Bridges to Excellence, CMS PQRI and New York City Department of Health (Take Care New York and eHearts). Their analysis concluded that the measures in these programs consistently use the same clinical data elements for evaluation and calculation; it is the measures themselves that vary slightly. Furthermore, electronic reporting is moving toward standardization through the use of the NHIN Quality Reporting Document Architecture (QRDA) specifications for outcomes data reporting. Because NextGen is centrally collecting and reporting registry outcomes data, their clients are able to participate in all quality programs available to them without additional work on their part. NextGen frequently hears from clients that participating in a program such as Bridges makes it much easier to participate in other programs from an operational perspective because once you have successfully reported into one program; you have built the foundation to seamlessly report into them all. Furthermore, practices find using their registry simplifies reporting because they do not have to be concerned with the specific technical requirements for each program. Consequently, clients can report into a variety of programs (BTE, CMS PQRI, NCQA PCMH and others) through natural course of treating a patient and properly documenting the encounter in the NextGen EHR.

NextGen's experience in the role of outcomes registry and data aggregator tells them that this is a natural fit for them as a Healthcare Information Technology provider. They have found that their integrated registry has afforded them the opportunity to work with clients in utilizing their EHR more efficiently. Also, by integrating the concept of documenting for quality into new EHR implementations, best practices are in use on day one rather than needing to retrain later. This is a huge benefit for clients. It is important to note that for any practice, there is much more involved in implementing performance measurement and outcomes reporting than just reporting data. Operational best practices must be in place to make the program successful. Many physicians find they are not doing as well as perceived after receiving their first outcomes measurement feedback report. Physician's performance issues may be related to improper documentation in the EHR and in some cases improvement is needed in following clinical guidelines for meeting the practices outcomes goals. NextGen finds the ability to provide their own subject matter expertise as well as “connecting” their client base to leverage experienced practices that are in the trenches, which are willing to provide a real world roadmap for practices new to the concept that might not otherwise be available.

In summary, when an EHR implements registry capabilities and HIT providers take on the role of data aggregator, physicians reap the rewards in being able to leverage their clinical data seamlessly across any outcomes program. Furthermore, as ARRA and meaningful use evolves, physicians will already be prepared to meet legislative requirements and take advantage of other federal incentives such as ARRA funding of research grants. However, all of this must start with EHR adoption and consistent, accurate documentation of patient encounters.

CINA—HELPING THOSE THAT CAN'T HELP THEMSELVES

While some EMR vendors are working hard to make it easy for their users to submit quality and performance data to Bridges to Excellence (BTE) and other analytic, benchmarking, health exchange, or measurement organizations, many EMR vendors are simply not devoting the resources necessary to do this. Even those vendors who are developing the tools to assist their users must deal with a number of significant challenges.

One of the major challenges early adopters of EMRs have encountered is the variability in how data was entered into their system. Most EMRs have traditionally allowed a great deal of flexibility in how the system was actually used. Often the step of developing processes for consistent use of their EMRs by everyone in the practice was never done. Consequently, the same data element may be stored in multiple ways, and in multiple locations within the EMR.

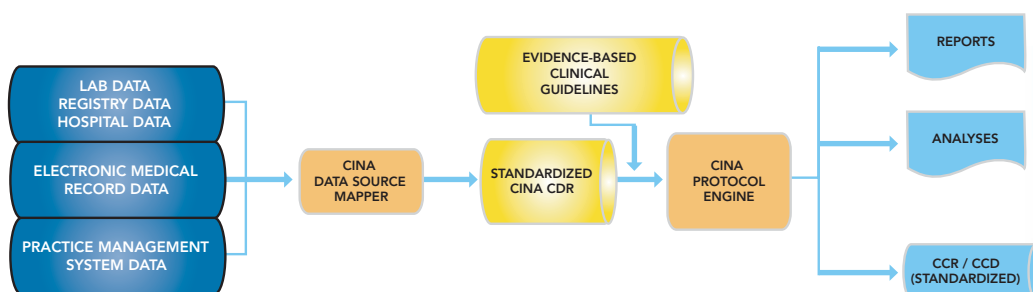
This can produce a significant challenge in extracting data across multiple providers for everything from clinical decision support to patient registries, benchmarking, analysis and performance reporting.

As some EMR vendors have become more focused on capturing data in structured, or even coded, manners, some of these challenges are starting to decrease. However, data entered prior to initiation of structured input will still be difficult to identify. In addition, many EMRs will still allow for varied, unstructured, and un-coded input.

CINA, a company focused on helping providers improve the quality of care they deliver, has developed tools to locate, abstract, standardize, encode, and store selected data into a separate industry-standard database, or Clinical Data Repository (CDR), located at the practice level. Since CINA's tools function independently from any particular EMR or other data source, they can create and maintain standardized databases that are identical with respect to structure and coding across a wide variety practices and settings.

Once a practice has all its relevant historical data in a standardized CDR, the data can easily be used for clinical decision support, patient registries, benchmarking, analysis and performance reporting to quality measurement organizations such as BTE. The processes of importing data into the standardized CDR, as well as extracting, aggregating and submitting data to third parties can be automated to the extent that little effort is required by the practice.

The following is a graphical representation of the processes implemented by the CINA system:



The graphic shows how data is “mapped” from various source databases, such as EMRs, and loaded into the standardized CDR. A separate application utilizes that data for performance reporting, as well as Clinical Decision Support (CDS), analyses, and extracting subsets of data for uses such as coordination of care.

While regularly reporting performance to quality organizations such as BTE can focus attention on areas in which a practice or provider is performing well, or in areas which need improvement, the same standardized data in the CDR can be used for Point-of-Care decision support, population management, registries, etc.

CINAs clients have shown that by focusing Providers’ attention to gaps in care at the point of care, rapid improvements in guideline compliance can be achieved. Additional benefits to the practice for improving their performance, and being able to objectively prove it, include significant increases in reimbursement (just by getting paid for providing recommended services that are often billable on a timely basis), successful participation in pay-for-performance programs, and inclusion in higher-tier reimbursement panels.

An example of how improved quality can go hand-in-hand with improved financial results is Medical Clinic of North Texas (MCNT), a 160-provider practice with over 40 locations in five different counties. MCNT was able to improve overall compliance across 19 measures from 53% to 74% in 19 months by, among other improvements, standardizing physician documentation. For individual measures, the results were even more dramatic. From a financial standpoint, MCNT was able to increase average revenue per visit by over \$6.00 (just by doing what was supposed to be done in a timely manner), earn the full Medicare PQRI bonus for the majority of their Providers, and secure a very favorable custom P4P bonus from one of their largest payers. However, more importantly, MCNT has re-defined itself as a quality-first organization, with all of their providers focused on quality improvement.

In summary, practices using an EMR that can’t easily summarize and submit data to BTE have alternatives for participation that require little effort on the practice’s part and which also can have a very positive ROI.

CONCLUSION



These case studies are just a few of the many examples of performance measurement and quality improvement that are occurring in the country. And they only represent some of the organizations that we're working with. As adoption of EMRs continues to grow, we will work with any organization that is interested in participating in this Performance Assessment Process.

Our goal has been, and will continue to be, to give the information to physicians that will help them improve the quality of care that they deliver, to give employers and health plans the information on physicians that they need to create meaningful incentives for excellence, and to let consumers know which physicians are delivering quality care so that they can seek them out in their time of need.

We hope you'll join us.

We'd like to thank all those who already have:

ABIM, Allscripts, athenaHealth, Better Health Greater Cleveland, BioSignia, CINA, DocSite, eClinicalWorks, EPIC, GE Healthcare, HealthMeasures of Greater Cincinnati, IPRO, MA eHealth Collaborative, Meridios, MN Community Measurement, NextGen, NCQA, and NYC Department of Health and Mental Hygiene

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