

Discussion of Quality Measurement
from the NCHICA HIE Council's
Quality of Care and Value Committee

*Quality Measures and Initiatives in
North Carolina*

Presented to the North Carolina Health
Information Strategic Planning Task Force

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1 Executive Summary

NCHICA's Quality and Value Committee is a standing committee, reporting to the HIE Council. Its broad goals are to assure the clinical and patient-centered relevance during the deployment of health information technology (health IT) resources and the growth of a health information exchange (HIE) network in North Carolina. The Quality and Values Committee works in collaboration with other committees reporting to the HIE Council and identifies opportunities to collaborate with the many federal and state-level organizations that address quality, safety and value in North Carolina. In order to know if quality is high or low, it must be measured using evidence-based techniques. Furthermore, in order to demonstrate the value of new systems such as HIE, quality must be objectively measured to know that it has improved (or not!). This discussion paper summarizes the traditional and well-established approach to defining quality in healthcare measures the structure, process and outcomes of the system. This paper also summarizes the major quality initiatives affecting North Carolina healthcare. The Quality of Care and Values Committee has a critical role in assuring that measurable quality improvement is a component of NC's HIE network, that providers are current in their understanding and practice of meaningful use of EMR, and that healthcare systems are interoperable to facilitate the development of NC's HIE.

2 Background

2.1 The North Carolina Healthcare Information and Communications Alliance (NCHICA) and Quality of Care

In October 2008, NCHICA's Quality and Value Committee was formed and developed its mission and charter (see below). Health information technology (health IT) has been shown to improve the delivery and quality of health care as noted by a recent systematic reviews by the Agency of Health Research and Quality (AHRQ).¹ Technology tools like electronic health records (EHRs), disease registries, health information exchange (HIE), patient portals, disease dashboards and others improve the quality of care. These tools, especially if linked across providers in an HIE framework, allow clinicians access to all relevant sources at the point of care in real-time for a comprehensive longitudinal view of their patients' health. If EHRs incorporate clinical guidelines or protocols with alerts and enhanced intervention management, they allow providers to practice evidence-based medicine which has been shown to enhance quality of care.² Several national and state level organizations have implemented programs to improve quality of care delivered by measuring performance of providers. Qualifying providers who successfully meet these performance criteria benchmarks are rewarded. Each program has its own performance measurement criteria which are aligned with the program's objective.

In the discussion below, we describe the mission and activities for the Quality of Care and Value Committee. This is followed by a brief discussion of quality measures and data sources for measuring quality. Lastly, we discuss national performance indicators briefly followed by an in-depth presentation of quality initiatives ongoing in NC.

2.2 Quality of Care and Value Committee Charter

The Quality of Care and Value Committee is chartered to ensure that evidence-based and patient-centered clinical priorities are communicated and incorporated into the NC HIE Council's initiatives. The Committee is an advocate for **measurable**, effective, efficient, safe, and quality care for all North Carolinians.

The NC HIE Council –Quality of Care and Value Committee will contribute to the Council's mission by:

1. Leading evidence-based, collaborative HIE initiatives to improve the health of North Carolinians and to ensure clinical priorities are communicated and incorporated into statewide HIE efforts.
2. Evaluating and defining existing and/or needed metrics and reporting tools that should be used to describe how HIE projects facilitate access to health care, quality of care, efficiency of care delivery, patient experience and health status in North Carolina.
3. Recommending ways that HIE topics related to patient safety and quality enhancement can be integrated with academic education, public/population health, and research activities throughout NC.
4. Promoting the adoption of best practice health information management and technology by facilitating the establishment of a web-based resource and networking center for provider outreach and education on HIE-related safety and quality improvement in NC.
5. Facilitating communications between vendors and clinicians so that appropriate safety and quality measures are incorporated into medical record systems.
6. Serving as a stakeholder advisory group on quality and value for various public and private HIE efforts.
7. Serving in an advisory capacity to the standing committees of the NC HIE Council on the development of HIE projects that align with the mission of the North Carolina Healthcare Quality Alliance (NCHQA).
8. Identifying and pursuing partnerships and other opportunities to leverage public and private investments in HIT and HIE that support the mission of the NC HIE Council.
9. Identifying sustainable funding to support initiatives.

The Quality of Care and Value Committee Workgroup will limit its focus to facilitation and review of measurement activities that address the clinical processes and health care outcomes of an HIE.

3 Overview of Quality

3.1 Quality Measures

This section provides an overview of quality measures, including structure, process, and outcomes (which includes patient satisfaction) measures and the data sources that are used for their measurement.

There are several ways of measuring quality in health care. The main options are structure (or inputs), process, outcome, and consumer satisfaction. Consumer or patient satisfaction is usually considered as a type of outcome indicator, and so it will be included in that category for purposes of this discussion. Structure or input measures are not as useful as outcome measures as they only indicate a potential for providing or improving quality of care, and do not directly measure clinical processes of care or patient outcomes that better measure true quality.

Historically, health care accreditation organizations such as the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) have focused on structural indicators. After the Institute of Medicine published *Envisioning the National Health Care Quality Report*³, there's been a shift towards process and outcome indicators, with uptake from the quality monitoring organizations such as the National Committee on Quality Assurance (NCQA).⁴ Federal quality improvement efforts, including those by the Agency for Healthcare Research and Quality (AHRQ) and Medicare's Physician Quality Reporting Initiative (PQRI)⁵ have also focused on process and outcome measures.

Process indicators are typically more practical to measure and monitor than outcome indicators for quality improvement programs.⁶⁷ Four characteristics of outcome indicators make them often less feasible for routine monitoring of quality. First, outcomes often occur with lower frequency than associated process indicators. For example, breast cancer deaths occur at a rate of only about one per 1,000 women over age 50 (an outcome indicator). In contrast, NCQA and Medicare have published guidelines indicating that all women aged 50-69 should be receiving biennial mammograms (a process indicator). Second, outcomes often require long delays for evaluation of effects. For example, it takes five to ten years to get five-to-ten year survival rates. Process indicators can usually be routinely evaluated on an annual basis, or even more frequently, depending on how many patients are seen with a particular disease. Third, outcomes are often affected by factors outside the control of health plans or providers treating patients with chronic diseases. In contrast, process of care measures are by definition primarily under the control of health care providers. Fourth, significant improvements in processes are generally larger in relative terms than improvements in outcomes, making them easier to measure and significant changes easier to identify. Nonetheless, just because process indicators are usually easier to measure and track from year to year does not mean they should be used exclusively. An important consideration with process measures is that they be clearly linked to improved outcomes, or at least to a higher likelihood of improved outcomes.

3.2 Data Sources

Several data sources can be used for measuring process and outcome indicators, including claims data, medical records abstracts, and patient surveys. The reason for emphasizing a range of options for data sources is that each has advantages and disadvantages.⁸

Claims data have advantages in being a low cost option and reasonably complete, since they are primarily used for billing and providers have a direct financial incentive to ensure all possible bills are submitted for reimbursement. They are a low cost option since the data are already collected and computerized for billing purposes; thus there are no added data collection procedures or administrative burdens for patients, providers, or health plans. This also facilitates their use for longitudinal studies, which track health care indicators over multiple years. The high costs of data collection for the other sources often limits the time periods which can be studied.

Claims data also have an advantage in more easily enabling studies using large sample sizes, such as thousands of patients at a time. This results from the large numbers of enrollees covered in many health insurance plans. Large sample sizes allow meaningful comparisons between different types of health plans, different regions, and different subgroups of patients. The higher costs of data collection for the other two data sources often limit the sample sizes which can be obtained.

Another advantage of claims data is that recall bias is not a problem, as sometimes arises in patient surveys which inquire about a patient's health care utilization over the past four weeks or over a longer period. For these types of questions, claims data are often superior since the billing information is usually more accurate regarding utilization of health services than a patient's recall over lengthy periods.

The main disadvantage of claims data is its limited clinical information, especially compared with data collected using medical records and until recently, Medicare claims also lacked pharmaceutical data. Despite these limitations, the advantages of claims data have resulted in a number of studies, covering a range of chronic diseases, which have measured, tested, and evaluated specific process and outcome indicators for quality assessment using Medicare claims data.⁹¹⁰⁷¹¹¹²¹³¹⁴

The second data source, paper or electronic medical records, have the advantage of more detailed clinical information. For example, claims data can record that a laboratory test has been performed, but they will not reveal the specific clinical values provided by the results of the test. Medical records are also unique in their ability to provide data on physical examinations, neurological tests conducted by physicians, other measures of functional status and disability, results of MRIs and other radiology exams, and other detailed clinical data. They may also provide more complete information on diagnoses, complications, and comorbidities suffered by patients than claims data or patient surveys in some situations. As a result, medical records will be important data sources for quality indicators in situations where process interventions or outcomes are dependent on identifying patients with a particular clinical or functional status which cannot be identified through claims data or patient surveys.

As noted, the main disadvantage of medical records is the high cost of abstracting data from paper records in offices where electronic medical records are unavailable. The abstraction process is very labor intensive and usually requires a trained nurse or other clinician to ensure accuracy in the abstraction process. Another potential limitation of medical records abstractions is that most treatment takes place in outpatient settings, where medical records may be less detailed than for inpatient treatment.

The third data source, patient surveys, can also provide unique types of data for measuring process and outcome indicators. Some types of subjective outcomes, such as patient satisfaction, can only be studied through patient surveys. Mental health and social support are additional factors often studied through patient surveys. As noted, standardized HRQOL survey instruments have scales specifically designed to capture process and outcomes data.

Patient surveys have two main disadvantages. First, they may be costly, depending on how they are administered: by trained interviewers, by computer, by telephone, or by mail. Mail surveys may be a relatively low cost option in many cases, but they generally also suffer from lower response rates and higher rates of missing data, both of which can bias results. If trained interviewers are used, the data may be more complete, but the costs of administering the survey will be much higher. Some studies have struck a middle ground, using telephone or computer-aided surveys. Combinations are also possible to improve non-response. For example, when conducting a HRQOL survey of Medicare beneficiaries using a mailed survey, nonrespondents were contacted and interviewed by telephone.¹² The second disadvantage of patient surveys is their reliance on patient recall. For infrequent events (such as utilization of some types of health services), or long recall periods this may result in inaccurate data

A quality measurement approach using all three data sources has been taken by Medicare for its Health Care Quality Improvement Project^{15 16 17, 18 19, 20} The HCQIP includes a range of quality indicators for its priority diseases, and selects from among the three data sources discussed above to measure each indicator. Some are measured using claims data, such as the frequency of eye exams and hemoglobin A1c tests for diabetics. Some indicators are measured using medical records, such as appropriate use of angiotensin-converting enzyme inhibitors for patients hospitalized with congestive heart failure and early administration of beta blockers for patients hospitalized for acute myocardial infarction. And some indicators are measured using patient surveys, such as immunization coverage for influenza and pneumococcal pneumonia.

In sum, all three data sources have advantages and disadvantages. Hence efforts to measure process and outcome indicators should consider all three options before selecting the source – or sources – most suitable for each indicator.

3.3 Measuring Quality Indicators

In general, quality measures, regardless of whether they are structure, process, or outcome, consist of a numerator and a denominator. This permits the calculation of a performance rate which is the percentage of a defined patient population that receives a particular process of care or achieves a particular outcome. The numerator of a measure describes the clinical action required by the measure for reporting and performance. The population of eligible cases for which a measure applies is called the measure denominator (the eligible patient population associated with the measure's numerator).

4 Quality Measures

4.1 National Committee for Quality Alliance (NCQA)

The NCQA seal is a nationally recognized symbol of quality. NCQA is a non-profit committed to improve quality of health care has various recognition, certification and accreditation programs for health plans and providers. Organizations achieving these seals first pass a comprehensive review and annually report their performance. Employers and consumers can rely on this seal as an indicator that an organization is well-managed and delivers high quality care and service. Currently NCQA has 5 Physician Recognition programs: back pain, diabetes, heart/stroke, physician practice connections, and patient-centered medical homes⁴. The measures for these programs were developed in partnership with various national physician and professional associations.

Nationally approximately 12,000 physicians and practices have embraced the NCQA Physician Recognition Program, of which about 1000 physicians and practices in North Carolina have received recognition for their participation. California has the highest number of recognitions (3,000), followed by NC, New York and Massachusetts with approximately 900 and 500 recognitions respectively.²¹

4.2 Physician Quality Reporting Initiative (PQRI)

The 2006 Tax Relief and Health Care Act (TRHCA) required the establishment of a physician quality reporting system, including an incentive payment for eligible professionals (EPs) who satisfactorily report data on quality measures for covered services furnished to Medicare beneficiaries during the second half of 2007 (the 2007 reporting period). CMS named this program the Physician Quality Reporting Initiative (PQRI).²² The Medicare Improvements for Patients and Providers Act of 2008 (MIPPA) made the PQRI program permanent, but only authorized incentive payments through 2010. Eligible providers who meet the criteria for satisfactory submission of quality measures data for services furnished during the reporting period, January 1, 2009 - December 31, 2009, will earn an incentive payment of 2.0 percent of their total allowed charges for Physician Fee Schedule (PFS) covered professional services furnished during that same period (the 2009 calendar year).

More recently, the American Recovery and Reinvestment Act of 2009 incentivizes providers for the adoption and meaningful use of certified EHRs by 2015 for those caring for Medicare patients.²³ In addition, Medicare payments for any eligible professional who is not a meaningful EHR user beginning in 2015 will be reduced, except in certain circumstances where compliance with meaningful EHR requirements would result in a significant hardship.²⁴

4.3 National Quality Forum

The National Quality Forum (NQF) was created to develop and implement a national strategy for health care quality measurement and reporting.²⁵ It was established as a public-private partnership and has broad participation from national, state, regional, and local health care groups representing consumers, public and private purchasers, employers, health care professionals, provider organizations, health plans, accrediting bodies, labor unions, supporting industries, and organizations involved in health care research or quality improvement. The organizational members of the NQF promote a common approach to measuring health care quality and fostering system-wide capacity for quality improvement.

Their mission is to improve the quality of American healthcare by setting national priorities and goals for performance improvement, endorsing national consensus standards for measuring and publicly reporting on performance, and promoting the attainment of national goals through education and outreach programs. They do this by: (1) convening leaders to establish health care that is safe, effective, patient-centered, timely, efficient and equitable, (2) endorsing standards to measure and report on the quality and efficiency of healthcare in the United States, and (3) being a major driving force for and facilitator of continuous quality improvement of American healthcare quality.

4.4 Pharmacy Quality Alliance (PQA, Inc)

In April 2006, Dr. Mark McClellan, then Administrator of the Centers for Medicare and Medicaid Services (CMS), together with several pharmacy organizations and America's Health Insurance Plans (AHIP) established the Pharmacy Quality Alliance (PQA). PQA's initial mission was to:

Improve health care quality and patient safety through a collaborative process in which the key stakeholders agree on a strategy for measuring performance at the pharmacy and pharmacist-levels; collecting data in the least burdensome way; and reporting meaningful information to consumers, pharmacists, employers, payers and other healthcare decision makers to help make informed choices, improve outcomes and stimulate the development of new payment models.

PQA is a membership-based, consensus driven alliance that is focused on defining measures of appropriate medication use and improving patient safety. Additionally, there are initiatives underway to define performance measures for Medication Therapy Management (MTM) services.

MTM services and other medication optimization programs improve the quality and safety of medication use by creating quality improvement interactions between the physician (prescriber),

the pharmacist and the patient. An important component of the PQA measure development activities is to align quality measures with those that CMS may use in an evaluation of the prescription drug programs offered within Medicare Part D programs.

PQA, Inc., a pharmacy quality alliance, has funded and launched five demonstration projects to test the feasibility of creating systems to monitor the quality of pharmacy performance. PQA, Inc. is partnering with over 20 organizations, including health plans and pharmacies in testing new models for data aggregation, report generation, and quality improvement related to pharmacy services and use of medications. The partnerships include HIE's in other states. The awardees are (North Carolina awardees in bold):

- ***Outcomes Pharmaceutical Health Care in collaboration with Kerr Drug, Inc***
- *Highmark in collaboration with CECity.com and the Rite Aid Corporation*
- *Pharmacy Society of Wisconsin, representing the Wisconsin Pharmacy Quality Collaborative (WPQC), including the following payers, State of Wisconsin Dept of Health and Family Services, United Healthcare of Wisconsin, Unity Health Insurance and Group Health Cooperative of South Central Wisconsin*
- *Purdue University School of Pharmacy and Pharmaceutical Sciences in collaboration with The Regenstrief Institute (an informatics and healthcare research organization), the Indiana Health Information Exchange, Inc (IHIE), and the Indiana Pharmacists Alliance (IPA)*
- *University of Iowa and the Iowa Foundation for Medical Care in collaboration with Wellmark Blue Cross and Blue Shield, Iowa Medicaid Enterprise*

PQA initiatives, including the above demonstration projects, may lead to the ability to evaluate the care delivered by a particular pharmacy.

PQA is examining the best ways for doing this, including the use of PQA-endorsed pharmacy measures and PQA-developed reports in real-world settings. There is a wide diversity of plans, health information exchanges, quality improvement organizations, community pharmacies and academic institutions that have come together to be the early adopters to test in their pharmacies the 15 PQA measures as well as the questionnaire of consumer experiences. In conformance with NQF principles, each measure was evaluated and tested for its importance, scientific acceptance, usability and feasibility.

The 15 PQA measures being deployed fall into four categories: medication adherence/persistence; medication safety; medication appropriateness; and efficiency (cost).

A repository of PQA work products, resources and organizational information can be found at <http://www.pqaalliance.org>.

5 North Carolina Quality Initiatives

5.1 *Bridges to Excellence*

The Bridges to Excellence, a program started in 2003 by nation-wide employers, aims to not just merely lower or shift costs but also to improve the overall health care value (cost and quality). In North Carolina, the initiative is led by companies with a large presence in the state including IBM, Duke Energy, GlaxoSmithKline, Cisco, and Wachovia. Participating insurers, necessary to the success of the transformation of reimbursement, are BCBSNC, Aetna, United Healthcare, and CIGNA. The BTE program incorporates a technology strategy into healthcare delivery as it requires third level certification for participating physician practices. BTE recognizes the need for data exchange between providers of care to support the comprehensive patient summary profile required by the primary physician, the inclusion of the patient in promoting their own health status and decision-making activities, and the data elements needed for proper quality measurements and reimbursement tools.

In North Carolina the 3 BTE Programs implemented are: Physician Office Link, Diabetes Care Link, Cardiac Care Link. Physicians participating in these programs get rewarded per month for each patient covered by a participating employer. They can also win annual bonuses for these patients for demonstrating the adoption of “really good systems and processes of care” and are using them to deliver positive results in the management of their patients – especially ones suffering from chronic illness.

Market facts about this program in North Carolina:

Number of Recognized Physicians: 1,333

Rewards Paid to Date: \$2.4 million since 2006 (including BCBSNC pilot)

Number of Covered Lives in Market: 150,000

Performance Assessment Organizations and Measures: National Committee for Quality Assurance (NCQA)

5.2 *Community Care of North Carolina Quality Initiatives*

North Carolina’s Medicaid’s program, the Community Care of North Carolina (CCNC), is a well respected and a successfully implemented Patient Centered Medical Home environment. The CCNC is a network of 14 healthcare communities across North Carolina organized and operated by community physicians, hospitals, health departments and departments of social program services. Following ten years of development and deployment, with 3000 physicians and about 750,000 Medicaid beneficiaries the program aims to: improve the care of the Medicaid population while controlling costs, developing community networks capable of managing recipient care, fully develop the Medical Home and develop the systems needed to improve chronic illness. The enrolled Medicaid population has access to their own primary care physician. CCNC is designed to provide continuous, comprehensive care to patients and to maintain effective communication between all providers involved in the care process.

Evidence of significant success from the CCNC's initiatives was reported in a recent actuarial study from Mercer Human Resource Consulting Group.²⁶ This study found, when comparing what the Access model (case management model replaced by CCNC in 1998) would have cost in SFY06 without any concerted efforts to control costs, the program saved approximately \$154 - \$175 million while annual costs for the program were \$10.2 million. THE CCNC network has achieved this success even though it utilizes only manual processes and paper medical records.

To achieve the program objectives of access, quality, utilization, and cost CCNC focuses on program wide quality improvement and care management initiatives such as:

- Medication/pharmacy management,
- Emergency department utilization,
- Chronic disease management – asthma, diabetes and heart failure.
- Case Management of High Cost / High Risk Patients

Based on population needs some networks also have other quality initiative pilots like, Assuring Better Child Development, Chronic Obstructive Pulmonary Disease, Improving Pediatric Access through Collaborative Care Early, Diabetes Disparities, Co-Location and Mental Health Integration. The success of the CCNC model has been documented in studies conducted by both the Cecil G. Sheps Center for Health Services Research at the University of North Carolina (UNC) and the Mercer Human Resources Consulting Group, detailing savings from its asthma, diabetes, and pharmacy management programs of \$3.5 million, \$2.1 million, and \$1 million respectively.

5.2.1 Performance Measures

The program has various measures for the different initiatives. Quality measures are intended to stimulate or facilitate quality improvement efforts in CCNC practices and local networks, and to evaluate the performance of the program as a whole. Typically, Quality Initiative outcome data includes hospital admissions or use of the emergency room, while process measures may include periodic assessments or treatment plans recorded in the medical records. Currently the data are collected through claims databases and regular chart reviews.

These measures are identified by the Clinical Directors and are selected based on 1) clinical importance (based on disease prevalence and impact, and potential for improvement), 2) scientific soundness (strength of evidence underlying the clinical practice recommendation; evidence that the measure itself improves care; and the reliability, validity, and comprehensibility of the measure), and 3) implementation feasibility. Measures are not intended to capture every aspect of good clinical care. These measures are periodically reviewed and have evolved over the last 10 years to meet needs of the expanding enrolled Medicaid population (aged, blind and disabled) and providers/practices exposed to other quality initiatives (such as PQRI, NCQA, NCHQA, and Bridges to Excellence).

The Chronic Disease Management Programs for Asthma, Diabetes and Heart Failure have specific clinical results associated with these cost savings.²⁷

| CCNC Program | Measures | Results |
|------------------------------------|--|---|
| Asthma Disease Management | <p>Outcome:</p> <ul style="list-style-type: none"> • Inpatient Admission Rate • Inpatient Rate for Asthma • ED Utilization Rate • ED Utilization Rate for Asthma <p>Process Measures:</p> <ul style="list-style-type: none"> • % of asthma patients staged • % of patients staged II, III, and IV on maintenance medications • % of patients with a written Asthma Management Plan • % of patients receiving an annual influenza vaccine | <ul style="list-style-type: none"> • 40% lower hospital admission rate from FY2003 – FY 2006 • 16% lower ED utilization rate from FY2003 – FY 2006 • 24% lower episodic cost for children • 93% received appropriate inhaled steroids |
| Diabetes Disease Management | <p>Outcome:</p> <ul style="list-style-type: none"> • Inpatient Admission Rate • Inpatient Rate for Diabetes • ED Utilization Rate • ED Utilization Rate for Diabetes <p>Process Measures:</p> <ul style="list-style-type: none"> • Diabetic Flow Sheet in use • Continued care visits at least 2 x year • Blood pressure at every care visit • Referral for dilated eye exam every year • Foot exam every year • Sensory exam every year • HgbA1c at least 2 in 12 months • Annual Lipid profile • Annual Flu Vaccine • Pneumococcal vaccine done once | <ul style="list-style-type: none"> • 77% of diabetics got their annual lipid profile • 69% of diabetics got an annual foot exam • 97% of diabetics had their blood pressure checked at every continuing care visit • 96% of diabetics had a continued care visits at least 2 x year |
| Congestive Heart Failure | <p>Outcome:</p> <ul style="list-style-type: none"> • Heart Failure Hospitalization Rate • Heart Failure Re-admission Rate • Heart Failure ED Department Utilization Rate • Mean Heart Failure Enrollee Cost <p>Process Measures:</p> <ul style="list-style-type: none"> • % Patients with Echocardiogram in past 3 years • % with Ejection Fraction < 40%, | <ul style="list-style-type: none"> • 3000 CCNC enrollees have CHF at a cost of \$27,000 per patient • 83% of CCNC patients with CHF have had an echocardiogram in the last three years • 74% are on ARB • 65% are on Beta Blockers |

| | | |
|--|--|--|
| | <p>prescribed ACE Inhibitor or ARB after identification with heart failure</p> <ul style="list-style-type: none"> • % with Ejection Fraction < 40%, prescribed Beta Blocker after identification with heart failure • % prescribed ACEI or ARB, filling prescription at least 80% of months in claims database • % prescribed Beta Blocker, filling prescription at least 80% of months in claims database | |
|--|--|--|

While successes of the CCNC program is very impressive, it has been suggested that through the application of health information technology (HIT), even greater efficiencies in workflow, reduction in costs and improvements in quality care outcomes would be gained.

5.3 North Carolina Health Quality Alliance

The following section about the North Carolina Healthcare Quality Alliance is taken from its website²⁸:

The North Carolina Healthcare Quality Alliance (NCHQA) began in response to Governor Michael Easley’s call to the health care community to form an alliance of stakeholders to ensure that North Carolinians receive the best available care. Previously referred to as the Governor's Quality Initiative, or GQI, the Initiative is transitioning to a more formal structure, the NCHQA (or Alliance).

The initiative will align quality measures, provide feedback on performance, and provide support to providers.

1) **Align quality measures across payers to reduce the variation in quality measurement faced by providers.** This allows practitioners to concentrate on providing the best care as determined by state and national experts rather than determining which particular quality measure the patient’s insurer is using. The initial set of quality measures focuses on ambulatory care delivered to patients with at least one of five selected conditions: diabetes, asthma, congestive heart failure, hypertension, and post-myocardial infarction.

2) **Provide feedback on performance to practices.** Regular feedback is important to improving quality across all practices. NCHQA will facilitate the measurement and reporting of performance by participating practices to enable them to determine their strengths and weaknesses. Payers will not use the quality measure values to solely or primarily change the practice’s underlying reimbursement, but may use the aggregate quality measures for non-

punitive quality improvement purposes. Payer-specific averages for the quality measures will be available to the specific payer while practice-specific averages for the quality measures will be available to the specific practice, payers, and quality improvement consultants. Community and statewide averages for the quality measures will be publicly available.

3) **Support practices** throughout the quality improvement process using nationally-recognized models. Practices will receive regular reports on quality of care, how to disease registries and benefit from EHR consultation. In addition, they will be involved in quality collaboratives, receive free CME up to 20 hours/year, support to reach NCQA standards, staff development and continuing education, free access to the AHEC digital library, streamlined and coordinated practice support, and public recognition for participation. Quality improvement consultants will be available to help practices improve their quality by providing expertise on practice redesign, EHR consultation, assistance with rapid cycle quality improvement, and other services useful to practices interested in improving quality. To help offset initial costs to the practices, the initiative has built-in funding of \$2500 in one-time support to participating practices to help offset some of the additional costs incurred by in participating in this initiative.

5.4 Improving Performance in Practice

North Carolina is one of the two pilot states of the national initiative Improving Performance in Practice started by the The American Board of Medical Specialties through a grant from the Robert Johnson Wood Foundation. The program is now deployed in 7 states nationwide and is designed and driven by physicians. In North Carolina IPIP is deployed locally in the Community Care of North Carolina Networks with support from the regional American Health Education Centers (AHECs) and the local health departments to reach the primary care providers in their practices. Started in 2007 with 18 practices the program now has more than 100 practices statewide. IPIP aims at transforming the way healthcare is delivered by giving doctors the tools, systems and support they need.²⁹ It provides in-office assistance to physician practices to improve quality of care, efficiency and satisfaction for both patients and the healthcare team. It provides them with tools for incorporating population based strategies and care management. These tools and resources help the practices prepare for certification and recognition programs that are usually the first step in pay for performance (for eg. NCQA Diabetes Physician Recognition Program, Patient Centered Medical Home Recognition).³⁰

The in-office assistance is provided to the enrolled practices by Quality Improvement Consultants (QICs). QICs are employed at the regional AHECs and are trained by the Project Director. QICs regularly visit practices to assist them in QI techniques. They provide practices with free assessments about disease registries and EHR capability. They train providers to collect data to improve care provided at their practice and also educate them on board certification maintenance by making quality improvement an integral component of their practice. The program supports/incentivizes the practices to implement disease registries and quality improvement techniques.

The QICs meet quarterly at dinner meetings to exchange information and lessons learned from practice to practice. The exchange of information builds a statewide collaborative learning network and statewide resources the practices can gain from. Now, the practices have free access

to library resources such as up-to-date and evidence based references. Currently the program has 12 QICs and focuses on measures for Diabetes and Asthma only.

The IPIP measures for Diabetes and Asthma are aligned with the NCQA measures and also have some optional measures. Goals are set for practices to meet and in year 1 practices are expected to close the gap between their baseline performance and goal by at least 30%. Practices are expected to report monthly aggregate data and can compare performance to peers via the IPIP Practice Explorer tool.

Enrolled practices have shown improvement over the last couple of years. For example trained practices are instituting changes in practices to bring down the average HgbA1C of their Diabetic patient population to below 7 and prescribing Insulin to their Diabetic patients with HgbA1c greater than 9. Some practices have shown a jump in the percentage of Diabetic patients who get a Nephropathy Assessment from 0 to 20% in just 6 months.³¹

6 References

1. Chaudhry B, Wang J, Wu S, et al. Systematic review: impact of health information technology on quality, efficiency, and costs of medical care. *Ann Intern Med.* May 16 2006;144(10):742-752.
2. Shortell SM, Rundall TG, Hsu J. Improving patient care by linking evidence-based medicine and evidence-based management. *JAMA.* Aug 8 2007;298(6):673-676.
3. Institute of Medicine (U.S.). Committee on the National Quality Report on Health Care Delivery., Hurtado MP, Swift EK, Corrigan J, United States. Agency for Healthcare Research and Quality. *Envisioning the national health care quality report.* Washington, D.C.: National Academy Press; 2001.
4. NCQA. <http://www.ncqa.org/tabid/74/Default.aspx>. Accessed May 20, 2009.
5. Centers for Medicare & Medicaid Services. Physician Quality Reporting Initiative. <http://www.cms.hhs.gov/pqri/>. Accessed May 26, 2009.
6. Eddy DM. Performance measurement: problems and solutions. *Health Aff (Millwood).* Jul-Aug 1998;17(4):7-25.
7. Jencks SF, Cuerdon T, Burwen DR, et al. Quality of medical care delivered to Medicare beneficiaries: A profile at state and national levels. *JAMA.* Oct 4 2000;284(13):1670-1676.
8. Berlowitz DR, Brandeis GH, Moskowitz MA. Using administrative databases to evaluate long-term care. *J Am Geriatr Soc.* May 1997;45(5):618-623.
9. Asch SM, Sloss EM, Hogan C, Brook RH, Kravitz RL. Measuring underuse of necessary care among elderly Medicare beneficiaries using inpatient and outpatient claims. *JAMA.* Nov 8 2000;284(18):2325-2333.
10. Garnick DW, Fowles J, Lawthers AG, Weiner JP, Parente ST, Palmer RH. Focus on quality: profiling physicians' practice patterns. *J Ambul Care Manage.* Jul 1994;17(3):44-75.
11. Johantgen M, Elixhauser A, Bali JK, Goldfarb M, Harris DR. Quality indicators using hospital discharge data: state and national applications. *Jt Comm J Qual Improv.* Feb 1998;24(2):88-105.
12. McCall N, Pope G, Adamache K. *Research and Analytic Support for Implementing Performance Measurement in Medicare Fee For Service: First Annual Report.* Waltham, Massachusetts: Health Economics Research, Inc.;1998.
13. McCall N, Pope G, Adamache K. *Research and Analytic Support for Implementing Performance Measurement in Medicare Fee For Service: Second Annual Report.* Waltham, Massachusetts: Health Economics Research, Inc.;2000.
14. Weiner JP, Parente ST, Garnick DW, Fowles J, Lawthers AG, Palmer RH. Variation in office-based quality. A claims-based profile of care provided to Medicare patients with diabetes. *JAMA.* May 17 1995;273(19):1503-1508.
15. Centers for Medicare & Medicaid Services. *HCQIP - National Clinical Topics. Diabetes Project Description.* 2001a; www.hcfa.gov/quality/11a3-c.htm. Accessed November 6, 2001.
16. Centers for Medicare & Medicaid Services. *HCQIP - National Clinical Topics. Breast Cancer Project Description.* 2001b; www.hcfa.gov/quality/11a2-c.htm. Accessed Accessed: November 6, 2001.
17. Centers for Medicare & Medicaid Services. *HCQIP - National Clinical Topics. Heart Failure Project Description.* 2001c; www.hcfa.gov/quality/11a4-b.htm <<http://www.hcfa.gov/quality/11a4-b.htm>>. Accessed Accessed: November 6, 2001.

18. Centers for Medicare & Medicaid Services. *HCQIP - National Clinical Topics. Acute Myocardial Infarction Project Description*. 2001d; www.hcfa.gov/quality/11a1-b.htm. Accessed November 6, 2001.
19. Centers for Medicare & Medicaid Services. *HCQIP - National Clinical Topics. Pneumonia Project Description*. 2001e; www.hcfa.gov/quality/11a5-c.htm. Accessed November 6, 2001.
20. Centers for Medicare & Medicaid Services. *HCQIP - National Clinical Topics. Stroke Project Project Description*. 2001f; www.hcfa.gov/quality/11a6-a.htm. Accessed November 6, 2001.
21. NCQA. *recognition* [<http://recognition.ncqa.org/>]. Accessed May 20, 2009.
22. PQRI. *Overview* [http://www.cms.hhs.gov/PQRI/01_Overview.asp#TopOfPage]. Accessed May 20, 2009.
23. The American Recovery and Reinvestment Act of 2009. *Subtitle A—Medicare Incentives* [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:h1enr.pdf]. Accessed May 20, 2009.
24. The American Recovery and Reinvestment Act of 2009. <http://www.opencongress.org/bill/111-h1/show>. Accessed May 25, 2009.
25. National Quality Forum. <http://www.qualityforum.org/>. Accessed May 25, 2009.
26. Community Care of NC. Letter from Jeff Simms to Mercer Consulting. <http://www.communitycarenc.com/PDFDocs/Mercer%20SFY04.pdf>. Accessed May 25, 2009.
27. Community Care of NC. *Community Care at a Glance*, January 2009 www.communitycarenc.com. Accessed May 20, 2009.
28. North Carolina Healthcare Quality Alliance. <http://www.ncquality.org/aboutthealliance.html>. Accessed May 25, 2009.
29. Lefebvre A. *Practice Site Improvement - Building on Existing Infrastructure. Supporting Quality Improvement at the Practice Site- Lessons from the Field, A Center for Health Care Strategies Webinar*. Vol 2008.
30. Mountain Area Health Education Center. <http://www.mahec.net/patient/ipip.aspx>. Accessed May 20, 2009.
31. IPIP. IPIP Collaborative Practice Meeting, March 2009. <http://www.seahec.net/Departments/Research/IPIP/tabid/352/Default.aspx>.