MSSNY Contract Number: CO24582
Deliverable #3
Technology Component: Requirements Plan

Table of Contents

Foreword

The DOH OHITT/MSSNY PPSO (Physician Practice Support Organization) contract is a result of 2005 legislation directing the Department to "issue grant funding to one or more organizations broadly representative of physicians licensed in this state." Project funding was directed "to include, but not to be limited to:

a) efforts to incentivize electronic health record adoption;
b) interconnection of physicians through regional collaborations;
c) efforts to promote personalized health care and consumer choice;
d) efforts to enhance health care outcomes and health status generally through interoperable public health surveillance systems and streamlined quality monitoring."

The legislation also called for a final report from the Department that includes, among other requirements, "the appropriateness of a broader application of the health information technology program to increase the quality and efficiency of health care across the state."

The Medical Society of the State of New York (MSSNY) was awarded Contract Number CO24582 in April, 2009. The contract Statement of Work calls for MSSNY, along with representatives from NYS DOH and NYeC, to work with rural and solo and small group physician practices to plan, design, build, and begin operations for PPSOs that will focus on the following goals to improve the efficiency and effectiveness of health care consistent with the HIT vision and strategy being employed by NYS DOH and NYeC:

1. Performance reporting capabilities and interoperable HIT capacity connecting patients, clinicians, and payors and leveraging health information exchange amo.ng all stakeholders
2. Readily available evidence-based care guidelines
3. Improved access to care
4. Enhanced practice level quality of care evaluation and reporting of health care outcomes
5. Coordination of care for patients with chronic disease
6. Physician practice change management to leverage technology and delivery models
7. A new business model with payors actively supporting physician participation through an enhanced payment system

The following is Deliverable #3 of MSSNY Contract Number CO24582.

Deliverable #3 Overview

Per the contract, this deliverable includes:

Technology component: Plan for PPSO care management, quality measurement and performance reporting technology component consistent with technology and policy design established by NYeC and the NYS DOH.

1. Payor / State to Provider information requirements
2. Provider to Payor/ State information performance reporting requirements

Our work as directed by this contract places special emphasis on quality improvement. According to the Institute of Medicine, attributes of high quality care include practitioners and facilities focused on safety, timeliness, effectiveness, efficiency, equity, and patient centeredness. Most quality improvement is typically measured along four domains: access, experience, process, and outcomes.

This deliverable focuses on the project's information requirements with special emphasis on the performance measurement requirements. Performance measures are the heart of any quality improvement program and as such define the information requirements for the entire project. Prior to outlining the performance measures, the rationale for choosing the disease states and the associated measures is presented. The baseline assessment found that only 1 of the 33 practices participating in the project has the necessary quality improvement programs in place to become recognized as a NCQA Level II medical home. Therefore, quality improvement programs and performance measurement are new concepts and will need to be developed for the vast majority of practices. To not overburden practices with new complexity and to ensure successful implementation, measures will be deployed in a staggered fashion with an initial Phase I set of measures identified for this project. Phase II measures are also included for consideration in the future. Finally, the Appendixes of this deliverable include the Evidence Based Guidelines for care management as agreed upon by the 200+ providers and payors involved with the Adirondack Medical Home Pilot. These evidence based guidelines will not only serve as the foundation for care management, but also serve to further define the information requirements for successful completion of the project.

As with any technology project, this information requirements definition is the critical first step. In the next technology deliverable, the technology design (technical architecture) will be presented to fulfill the information requirements. The technology design will be followed by the implementation plan and then the final operating plan.

Approach to Choosing Diseases

Accepted public health and epidemiologic principles were used to select the adult and pediatric diseases targeted in this project. The criteria included:

- High disease prevalence
- Evidence of variability of care in the targeted population
- Evidence of sub-optimal care delivery in the ambulatory care setting
- Evidence of preventable ER visits
- Evidence of preventable hospital admissions
- Availability of respected, practical associated process measures
- Availability of respected, practical associated outcome measures
- Availability of utilization data
- Availability of cost data
- Availability of actionable, effective, respected evidence-based treatment guidelines
- Evidence of government public health initiatives to address disease (e.g., obesity)
- Ease of collection of measures in EMR
- Disease inclusion in NCQA medical home definition

The diseases chosen are:

- Adult
    - Diabetes Mellitus
    - Hypertension
    - Coronary Artery Disease
- Pediatrics
    - Prevention
    - Obesity
    - Asthma

Approach to Choosing Measures

All measures were evaluated on the following criteria:

- **Importance**
    - Relevance to stakeholders
    - Health importance
    - Applicable to measuring care distribution among various population strata
    - Potential for improvement
    - Susceptibility to influence by health care system

- **Scientific soundness**
  - Clinical
  - Explicitness of evidence
  - Strength of evidence
  - Measurement
  - Reliability
  - Validity
  - Allowance for stratification/case–mix adjustment
  - Comprehensible
- **Feasibility**
  - Explicit specification of numerator and denominator
  - Explicit description of inclusion & exclusion criteria
  - Data availability
  - Accessibility, timeliness, costs
- **Face validity** - An adequate quality indicator must have sound clinical or empirical rationale for its use. It should measure an important aspect of quality that is subject to provider or health care system control.
- **Precision** - An adequate quality indicator should have relatively large variation among providers or areas that is not due to random variation or patient characteristics. This criterion measures the impact of chance on apparent provider or community health system performance.
- **Minimum bias** - The indicator should not be affected by systematic differences in patient case-mix, including disease severity and comorbidity. In cases where such systematic differences exist, an adequate risk adjustment system should be possible using available data.
- **Construct validity** - The indicator should be related to other indicators or measures intended to measure the same or related aspects of quality. For example, improved performance on measures of inpatient care (such as adherence to specific evidence-based treatment guidelines) ought to be associated with reduced patient complication rates.
- **Fosters real quality improvement** - The indicator should be robust to possible provider manipulation of the system. In other words, the indicator should be insulated from perverse incentives for providers to improve their reported performance by avoiding difficult or complex cases, or by other responses that do not improve quality of care.
- **Application** - The indicator should have been used in the past or have high potential for working well with other indicators. Sometimes looking at groups of indicators together is likely to provide a more complete picture of quality.

Source - www.qualitymeasures.ahrq.gov and
http://www.qualityindicators.ahrq.gov/downloads/iqi/iqi_guide_rev3.pdf

Reason for Discarded Measures

A critical approach, based on weighing the value of the measure versus the cost of collecting it, was utilized to discard measures. The cost of measures was evaluated considering the following:

- Complexity of measure
- Probability of success in collecting measure
- Availability of measure within electronic systems
- Ease at incorporating the collection of measure within electronic systems
- Office personnel effort required to collect measure
- Reliability of measure's data point across practices, pods, etc.
- Importance of measure in determining quality when considered with other measures for the disease
- Importance of measure in determining utilization when considered with other measures for the disease
- Importance of measure in determining costs when considered with other measures for the disease

Measures that were determined to be costly to collect or unreliable across practices were quickly discarded. In addition, measures were evaluated as to their impact on data collection within practices. In summary, to achieve higher probabilities of a successful project, measures that did not meet high levels of ease of collection, use, and reliability were discarded.

Reason for Staggering Measurement Deployment

As noted above, measure selection and implementation is driven by a focus on enhancing the probability of a successful project. Deploying all chosen measures at the start of the project would significantly delay the actual start of the project by greatly adding to its complexity at an early stage. Rather than overburden practices with an overabundance of new processes and complex data reporting responsibilities, measures that provide great value in measuring care for the targeted diseases but were relatively easy to deploy, where chosen to be part of Phase 1 data collection.

During this Phase 1, practices will learn the processes necessary to efficiently collect and send data to the data warehouse. At the same time, project managers will learn the best practices for the collection and reporting of data. After approximately a year of collecting data, the Phase 2 measures will be re-evaluated. After re-evaluation, only those measures that will efficiently fit into the data collection processes will be deployed. It is expected that all Phase 2 measures will be deployed, but we reserve the option to modify based upon the realities of the project.

Approach to Report Development to Affect Change

Only through change management can we expect a positive improvement in clinical and financial outcomes from this project. To impact change in care delivery requires the following:

- Actionable, scientifically-based, targeted measures (see Approach to Choosing Measures)
- Accurate reporting of measures
- Regular reporting of measures
- Ease of access to measurement reports
- Easily understood measures reports
- Actionable measures reports
- Measures reports linked to best-practice guidelines

Measurement Development and Expected impact

Measures were chosen based upon the criteria in the section Approach to Choosing Measures. The tables below describe each measure chosen and the rationale for choosing that measure. In addition, measures are categorized by Phase 1 and Phase 2 measures (See Reason for Staggering Measurement Deployment).

© 2010 EastPoint Health, LLC

Business Confidential – Not to be distributed without written permission.   Page 8 of 35

Adult – Diabetes Mellitus, Patients 18-75 Years of Age – Phase 1	
Measure	*Rationale*
Hemoglobin A1c (HbA1c) - Percent of patients receiving one or more HbA1c test, measurement period Measure Result Source – QDC Data Source - EHR	HbA1c is a recognized and proven measure of average patient blood sugar levels over a period of time, and therefore is used to evaluate the degree a patient's diabetes mellitus is under control. NCQA uses this measure in evaluating health plans. When combined with the other measures in this table, it helps give an indication of how well a physician is managing diabetic patients. This measure was chosen for the following characteristics: • Importance – major DM monitor • Scientific soundness – Proven quality measure • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – process measure but often used to indicate level of care delivery • Precision – high as process measure • Minimum bias – not affected by case-mix, selection bias • Construct validity – precedes HbA1c values • Fosters real quality improvement – actionable measure • Application – used in HEDIS and other measurement efforts
Hemoglobin A1c (HbA1c) - Percent of patients with most recent HbA1c level >9.0%, measurement period Measure Result Source – QDC Data Source - EHR	Patients with a HbA1c level above 9% do not have their DM under proper control and therefore may indicate poor. Although some patients may not follow their prescribed care regimen, it is not expected that selection bias would deliver skewed results from the norm. This measure was chosen for the following characteristics: • Importance – major DM monitor • Scientific soundness – Proven quality measure • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – clinical outcome measure • Precision – highly accepted outcome measure • Minimum bias – minimally affected by demographic factors • Construct validity – tightly tied to other quality measures • Fosters real quality improvement – actionable measure • Application – used in HEDIS and other measurement efforts
Hemoglobin A1c (HbA1c) - Percent of patients with most recent HbA1c level <=8%, measurement period Measure Result Source – QDC Data Source - EHR	In some populations, patients with a HbA1c level below 8% are assumed to have their DM under proper control. Although 7% is the usual standard there is some evidence that a level below 8% in some populations is acceptable. Therefore we decided to collect data for both quality standards. This measure was chosen for the following characteristics: • Importance – major DM monitor • Scientific soundness – Proven quality measure • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – clinical outcome measure • Precision – highly accepted outcome measure • Minimum bias – minimally affected by demographic factors • Construct validity – tightly tied to other quality measures • Fosters real quality improvement – actionable measure • Application – used in HEDIS and other measurement efforts

Adult – Diabetes Mellitus, Patients 18-75 Years of Age – Phase 1	
Measure	*Rationale*
Hemoglobin A1c (HbA1c) - Percent of patients with most recent HbA1c level <=7%, measurement period Measure Result Source – QDC Data Source - EHR	In some populations, patients with a HbA1c level below 7% are assumed to have their DM under proper control (See 8% standard elsewhere in this table). This measure was chosen for the following characteristics: • Importance – major DM monitor • Scientific soundness – Proven quality measure • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – clinical outcome measure • Precision – highly accepted outcome measure • Minimum bias – minimally affected by demographic factors • Construct validity – tightly tied to other quality measures • Fosters real quality improvement – actionable measure • Application – used in HEDIS and other measurement efforts
Lipid –Percentage of patients receiving at least one low-density lipoprotein cholesterol (LDL-C) test, measurement period Measure Result Source – QDC Data Source - EHR	LDL-C is a recognized and proven measure of lipid levels that are tied to risk of CAD. As patients with DM are at a higher risk of CAD, use of this respected CAD measure is appropriate as management of CAD should be a part of any overarching management of a patient with DM. This measure was chosen for the following characteristics: • Importance – major DM and CAD monitor • Scientific soundness – Proven quality measure for CAD • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – process measure but often used to indicate level of care delivery • Precision – high as process measure • Minimum bias – not affected by case-mix, selection bias • Construct validity – precedes LDL-C values • Fosters real quality improvement – actionable measure • Application – used in HEDIS and other measurement efforts
Lipid – Percent of patients with Dx of DM with LDL-C < 100 mg/dl from last test done, over measurement period Measure Result Source – QDC Data Source - EHR	LDL-C level under 100 mg/dl is a recognized indicator of lipid levels under control. As patients with DM are at a higher risk of CAD, use of this respected CAD measure is appropriate as management of CAD should be a part of any overarching management of a patient with DM. This measure was chosen for the following characteristics: • Importance – major DM and CAD monitor • Scientific soundness – Proven quality measure for CAD • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – clinical outcome measure • Precision – highly accepted outcome measure • Minimum bias – minimally affected by demographic factors • Construct validity – tightly tied to other quality measures • Fosters real quality improvement – actionable measure • Application – used in HEDIS and other measurement efforts

Adult – Diabetes Mellitus, Patients 18-75 Years of Age – Phase 1	
Measure	*Rationale*
Lipid – Percent of patients with DM with LDL-C >= 130 mg/dl from last test done, over measurement period Measure Result Source – QDC Data Source - EHR	LDL-C level over 130 mg/dl is a recognized indicator of lipid levels not under adequate control. As patients with DM are at a higher risk of CAD, use of this respected CAD measure is appropriate as management of CAD should be a part of any overarching management of a patient with DM. This measure was chosen for the following characteristics: • Importance – major DM and CAD monitor • Scientific soundness – Proven quality measure for CAD • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – clinical outcome measure • Precision – highly accepted outcome measure • Minimum bias – minimally affected by demographic factors • Construct validity – tightly tied to other quality measures • Fosters real quality improvement – actionable measure • Application – used in HEDIS and other measurement efforts
Urine Profile – Percentage of patients receiving at least one nephropathy assessment (microalbumin/creatinine ratio, a 24 hour urine for microalbuminuria, timed urine for or spot urine for microalbuminuria or positive urinalysis for protein) during the measurement period Measure Result Source – QDC Data Source - EHR	Due to the impact of elevated blood glucose levels on the kidney through its nephrotoxity or manifestations as CAD nephropathy should be monitored to allow for appropriate care that can mitigate the insult to the kidney. Test values are not included in this measure due to the added complexity of collecting such a value when weighed against the benefits. This measure was chosen for the following characteristics: • Importance – major DM and CAD monitor • Scientific soundness – Proven quality measure for DM • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – process measure but often used to indicate level of care delivery • Precision – high as process measure • Minimum bias – not affected by case-mix, selection bias • Construct validity – screening measure • Fosters real quality improvement – actionable measure • Application – used in HEDIS and other measurement efforts
Hypertension Control – Percent of patients with most recent systolic blood pressure <130 mm/Hg AND diastolic blood pressure <80 mm/Hg, measurement period Measure Result Source - QDC Data Source - EHR	As DM patients are at a higher risk for CAD, properly controlling blood pressure is an important part of an adequate care plan. Blood pressure with a systolic pressure <130 mm/Hg and a diastolic pressure <80 mm/Hg is indicative of being under control for care. This measure was chosen for the following characteristics: • Importance – major DM and CAD monitor • Scientific soundness – Proven quality measure for CAD • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – clinical outcome measure • Precision – highly accepted outcome measure • Minimum bias – minimally affected by demographic factors • Construct validity – tightly tied to other quality measures • Fosters real quality improvement – actionable measure • Application – used in HEDIS and other measurement efforts

Adult – Diabetes Mellitus, Patients 18-75 Years of Age – Phase 1

Measure	*Rationale*
Hyper tension Control – Percent of patients with most recent systolic blood pressure >= 140 mm/Hg OR diastolic blood pressure >= 90 mm/Hg, measurement period Measure Result Source - QDC Data Source - EHR	As DM patients are at a higher risk for CAD, properly controlling blood pressure is an important part of an adequate care plan. Blood pressure with a systolic pressure <130 mm/Hg and a diastolic pressure <80 mm/Hg is indicative of being under control for care. This measure was chosen for the following characteristics: - Importance – major DM and CAD monitor - Scientific soundness – Proven quality measure for CAD - Feasibility – available in EMRs; ease of electronic data exchange - Face validity – clinical outcome measure - Precision – highly accepted outcome measure - Minimum bias – minimally affected by demographic factors - Construct validity – tightly tied to other quality measures - Fosters real quality improvement – actionable measure - Application – used in HEDIS and other measurement efforts
ER Visits - Number of ER visits of patients with Dx of DM and discharge Dx diabetes related during measurement period Measure Result Source – Hospital Data (Treo) Data Source – Hospital Data (Treo)	Appropriate care for patients with diabetes mellitus should virtually eliminate the need for these patients to seek care in the ER through the prevention of morbidity associated with hyperglycemia (e.g., diabetic ketoacidosis, severe dehydration). Regular practice/clinic based care should prove less expensive than ER based care. Therefore, tracking of this measure is a good surrogate for cost savings as well as quality. Analysis is compiled from a utilization data warehouse and reported on a physician, practice and regional level.
ER Visits (Trend) - Number of ER visits of patients with DX of DM and discharge Dx diabetes related during measurement period and previous period (trend) Measure Result Source – Hospital Data (Treo) Data Source – Hospital Data (Treo)	See above (ER Visits). This will trend utilization.
Admissions - Number of admissions of patients with DX of DM and discharge Dx diabetes related during measurement period Measure Result Source – Hospital Data (Treo) Data Source – Hospital Data (Treo)	Appropriate care for patients with diabetes mellitus should virtually eliminate the need for these patients to require admission solely due to hyperglycemia (e.g., diabetic ketoacidosis). Regular practice/clinic based care should prove less expensive than hospital admissions. Therefore, tracking of this measure is a good surrogate for cost savings as well as quality. Analysis is compiled from a utilization data warehouse and reported on a physician, practice and regional level.

Adult – Diabetes Mellitus, Patients 18-75 Years of Age – Phase 1	
Measure	*Rationale*
Admissions (Trend) - Number of admissions of patients with DX of DM and discharge Dx diabetes related during measurement period and previous period (trend) Measure Result Source – Hospital Data (Treo) Data Source – Hospital Data (Treo)	See above (Admissions). This will trend utilization.
Cost of Admission - Median cost of admission of patients with DX of DM and discharge Dx diabetes related during measurement period Measure Result Source – TBD Data Source – Payor Data	Appropriate care for patients with diabetes mellitus should virtually eliminate the need for these patients to require admission solely due to hyperglycemia (e.g., diabetic ketoacidosis). Regular practice/clinic based care should prove less expensive than hospital admissions. Therefore, tracking of this measure is a good measure of cost savings as well as quality. Analysis is compiled from a payor data warehouse and reported on a physician, practice and regional level.
Cost of Admission (Trend) - Median cost of admission of patients with DX of DM and discharge Dx diabetes related during measurement period and previous period (trend) Measure Result Source – TBD Data Source – Payor Data	See above (Cost of Admissions). This will trend costs.

Adult – Diabetes Mellitus, Patients 18-75 Years of Age – Phase 2	
Measure	*Rationale*
Eye Exam – Percent of patients who received a dilated eye exam or evaluation of retinal photographs by an optometrist or ophthalmologist within the measurement period Measure Result Source – TBD Data Source – TBD	Eye exams are an important part of a comprehensive program to manage patients with diabetes mellitus. NCQA uses this measure in evaluating health plans. When combined with the other measures in this table, it helps give an indication of how well a physician is managing diabetic patients. Efficient data collection of this measure requires an electronic process to avoid the high cost of record review. Efficient data collection will only come after the implementation of medical homes in each of the practices and effective implementation and use of EMRs. As other diabetes measures provide a good, initial surrogate for diabetes care, this measure is assigned to a second phase in the project when it can become part of a more robust, efficient data collection process. This measure was chosen for the following characteristics: • Importance – major DM monitor • Scientific soundness – Proven quality measure • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – process measure but often used to indicate level of care delivery • Precision – high as process measure • Minimum bias – not affected by case-mix, selection bias • Construct validity – important screening measure due to DM associated morbidity • Fosters real quality improvement – actionable measure • Application – used in HEDIS and other measurement efforts
Foot Exam – Percent eligible patients (defined as those without bilateral amputations) receiving at least one foot exam, defined in any manner, measurement period Measure Result Source – TBD Data Source - TBD	Foot exams are an important part of a comprehensive program to manage patients with diabetes mellitus. NCQA uses this measure in evaluating health plans. When combined with the other measures in this table, it helps give an indication of how well a physician is managing diabetic patients. Efficient data collection of this measure requires an electronic process to avoid the high cost of record review. Efficient data collection will only come after the implementation of medical homes in each of the practices and effective implementation and use of EMRs. As other diabetes measures provide a good, initial surrogate for diabetes care, this measure is assigned to a second phase in the project when it can become part of a more robust, efficient data collection process. This measure was chosen for the following characteristics: • Importance – major DM monitor • Scientific soundness – Proven quality measure • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – process measure but often used to indicate level of care delivery • Precision – high as process measure • Minimum bias – not affected by case-mix, selection bias • Construct validity – important screening measure due to DM associated morbidity • Fosters real quality improvement – actionable measure • Application – used in HEDIS and other measurement efforts

Adult – Hypertension, Patients 18-85 Years of Age – Phase 1	
Measure	**Rationale**
Hypertension Control – Percent of patients with most recent systolic blood pressure <130 mm/Hg AND diastolic blood pressure <80 mm/Hg, measurement period Measure Result Source - QDC Data Source - EHR	Blood pressure with a systolic pressure <130 mm/Hg and a diastolic pressure <80 mm/Hg is indicative of being under control for care. This measure was chosen for the following characteristics: • Importance – major measurement of care • Scientific soundness – Proven quality measure for HTN • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – clinical outcome measure • Precision – highly accepted outcome measure • Minimum bias – minimally affected by demographic factors • Construct validity – tightly tied to other quality measures • Fosters real quality improvement – actionable measure • Application – used in HEDIS and other measurement efforts
Hypertension Control – Percent of patients with most recent systolic blood pressure >= 140 mm/Hg OR diastolic blood pressure >= 90 mm/Hg, measurement period Measure Result Source - QDC Data Source - EHR	Blood pressure with a systolic pressure <130 mm/Hg and a diastolic pressure <80 mm/Hg is indicative of being under control for care. This measure was chosen for the following characteristics: • Importance – major measurement of care • Scientific soundness – Proven quality measure for HTN • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – clinical outcome measure • Precision – highly accepted outcome measure • Minimum bias – minimally affected by demographic factors • Construct validity – tightly tied to other quality measures • Fosters real quality improvement – actionable measure • Application – used in HEDIS and other measurement efforts

Adult – Hypertension, Patients 18-85 Years of Age – Phase 2	
Measure	**Rationale**
Obesity Treatment - percentage of patients who have had a diagnosis of hypertension and who had a BMI greater than or equal to 95th percentile who are receiving treatment (dietary and activity counseling/education), measurement period. Measure Result Source – TBD Data Source - TBD	Obesity is clinically tied to hypertension. Reduction in BMI has a positive impact on hypertension and is considered a treatment modality. When combined with the other measures in this table, it helps give an indication of how well a physician is managing hypertensive patients. Further work is needed to define "receiving treatment." In addition, efficient data collection of this measure requires an electronic process to avoid the high cost of record review. Efficient data collection will only come after the implementation of medical homes in each of the practices and effective implementation and use of EMRs. As other hypertension measures provide a good, initial surrogate for hypertension, this measure is assigned to a second phase in the project when it can become part of a more robust efficient data collection process. This measure was chosen for the following characteristics: • Importance – hypertension treatment modality • Scientific soundness – Proven treatment modality • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – process measure but can be used to indicate level of care delivery when combined with other measures • Precision – high as process measure • Minimum bias – not affected by case-mix, selection bias • Construct validity – important treatment measure • Fosters real quality improvement – actionable measure • Application – effective treatment modality

Adult – Hypertension, Patients 18-85 Years of Age – Phase 2	
Measure	*Rationale*
Obesity Treatment - percentage of patients who have had a diagnosis of hypertension and who had a BMI greater than 85th percentile but less than the 95th percentile who are receiving treatment (dietary and activity counseling/education), measurement period. Measure Result Source – TBD Data Source - TBD	Obesity is clinically tied to hypertension. Reduction in BMI has a positive impact on hypertension and is considered a treatment modality. When combined with the other measures in this table, it helps give an indication of how well a physician is managing hypertensive patients. Further work is needed to define "receiving treatment." In addition, efficient data collection of this measure requires an electronic process to avoid the high cost of record review. Efficient data collection will only come after the implementation of medical homes in each of the practices and effective implementation and use of EMRs. As other hypertension measures provide a good, initial surrogate for hypertension, this measure is assigned to a second phase in the project when it can become part of a more robust efficient data collection process. The measure is similar to the other BMI measure in this table and was added to provide an additional reporting option. This measure was chosen for the following characteristics: • Importance – hypertension treatment modality • Scientific soundness – Proven treatment modality • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – process measure but can be used to indicate level of care delivery when combined with other measures • Precision – high as process measure • Minimum bias – not affected by case-mix, selection bias • Construct validity – important treatment measure • Fosters real quality improvement – actionable measure • Application – effective treatment modality

Adult – Coronary Artery Disease (CAD), Patients 18-85 Years of Age – Phase 1	
Measure	*Rationale*
Lipid –Percentage of patients with a Dx of CAD and receiving at least one low-density lipoprotein cholesterol (LDL-C) test, measurement period Measure Result Source - QDC Data Source - EHR	LDL-C is a recognized and proven measure of lipid levels that are tied to risk of CAD. As patients with DM are at a higher risk of CAD, use of this respected CAD measure is appropriate as management of CAD should be a part of any overarching management of a patient with DM. This measure was chosen for the following characteristics: • Importance – major DM and CAD monitor • Scientific soundness – Proven quality measure for CAD • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – process measure but often used to indicate level of care delivery • Precision – high as process measure • Minimum bias – not affected by case-mix, selection bias • Construct validity – precedes LDL-C values • Fosters real quality improvement – actionable measure • Application – used in HEDIS and other measurement efforts
Lipid – Percent of patients with Dx of CAD with LDL-C < 100 mg/dl from last test done, over measurement period Measure Result Source - QDC Data Source - EHR	LDL-C level under 100 mg/dl is a recognized indicator of lipid levels under control. As patients with DM are at a higher risk of CAD, use of this respected CAD measure is appropriate as management of CAD should be a part of any overarching management of a patient with DM. This measure was chosen for the following characteristics: • Importance – major DM and CAD monitor • Scientific soundness – Proven quality measure for CAD • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – clinical outcome measure • Precision – highly accepted outcome measure • Minimum bias – minimally affected by demographic factors • Construct validity – tightly tied to other quality measures • Fosters real quality improvement – actionable measure • Application – used in HEDIS and other measurement efforts
Hypertention Control – Percent of patients with most recent systolic blood pressure <130 mm/Hg AND diastolic blood pressure <80 mm/Hg, measurement period Measure Result Source - QDC Data Source - EHR	Blood pressure with a systolic pressure <130 mm/Hg and a diastolic pressure <80 mm/Hg is indicative of being under control for care. This measure was chosen for the following characteristics: • Importance – major measurement of care • Scientific soundness – Proven quality measure for HTN • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – clinical outcome measure • Precision – highly accepted outcome measure • Minimum bias – minimally affected by demographic factors • Construct validity – tightly tied to other quality measures • Fosters real quality improvement – actionable measure Application – used in HEDIS and other measurement efforts
Hyper tension Control – percentage of patients who had a diagnosis of CAD with most recent systolic blood pressure >= 140 mm/Hg OR diastolic blood pressure >= 90 mm/Hg, current Measure Result Source - QDC Data Source - EHR	Blood pressure with a systolic pressure <130 mm/Hg and a diastolic pressure <80 mm/Hg is indicative of being under control for care. This measure was chosen for the following characteristics: • Importance – major measurement of care • Scientific soundness – Proven quality measure for HTN • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – clinical outcome measure • Precision – highly accepted outcome measure • Minimum bias – minimally affected by demographic factors • Construct validity – tightly tied to other quality measures • Fosters real quality improvement – actionable measure • Application – used in HEDIS and other measurement efforts

Adult – Coronary Artery Disease (CAD), Patients 18-85 Years of Age – Phase 2	
Measure	*Rationale*
Obesity Treatment - percentage of patients with a Dx of CAD who had a BMI greater than or equal to the 95th percentile who are receiving treatment (dietary and activity counseling/education) Measure Result Source - TBD Data Source - TBD	Obesity is clinically tied to CAD. Reduction in BMI has a positive impact on CAD (e.g., hypertension) and is considered a treatment modality. When combined with the other measures in this table, it helps give an indication of how well a physician is managing CAD patients. Further work is needed to define "receiving treatment." In addition, efficient data collection of this measure requires an electronic process to avoid the high cost of record review. Efficient data collection will only come after the implementation of medical homes in each of the practices and effective implementation and use of EMRs. As other CAD measures provide a good, initial surrogate for hypertension, this measure is assigned to a second phase in the project when it can become part of a more robust efficient data collection process. This measure was chosen for the following characteristics: • Importance – CAD treatment modality • Scientific soundness – Proven treatment modality • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – process measure but can be used to indicate level of care delivery when combined with other measures • Precision – high as process measure • Minimum bias – not affected by case-mix, selection bias • Construct validity – important treatment measure • Fosters real quality improvement – actionable measure • Application – effective treatment modality
Obesity Treatment - percentage of patients with a Dx of CAD who had a BMI greater than 85th percentile but less than the 95th percentile who are receiving treatment (dietary and activity counseling/education) Measure Result Source – TBD Data Source - TBD	Obesity is clinically tied to CAD. Reduction in BMI has a positive impact on CAD (e.g., hypertension) and is considered a treatment modality. When combined with the other measures in this table, it helps give an indication of how well a physician is managing CAD patients. Further work is needed to define "receiving treatment." In addition, efficient data collection of this measure requires an electronic process to avoid the high cost of record review. Efficient data collection will only come after the implementation of medical homes in each of the practices and effective implementation and use of EMRs. As other CAD measures provide a good, initial surrogate for hypertension, this measure is assigned to a second phase in the project when it can become part of a more robust efficient data collection process. The measure is similar to the other BMI measure in this table and was added to provide an additional reporting option. This measure was chosen for the following characteristics: • Importance – CAD treatment modality • Scientific soundness – Proven treatment modality • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – process measure but can be used to indicate level of care delivery when combined with other measures • Precision – high as process measure • Minimum bias – not affected by case-mix, selection bias • Construct validity – important treatment measure • Fosters real quality improvement – actionable measure • Application – effective treatment modality

Pediatrics – Prevention – Phase 1	
Measure	**Rationale**
Lead Screening - Percentage of patients with at least one blood lead screening test at 24 months of age Measure Result Source – QDC Data Source - EHR	Lead screening of children by the second birthday is a major public health initiative of the NYS Department of Health (http://www.health.state.ny.us/publications/2378.pdf). • Importance – major preventive care measure • Scientific soundness – Proven quality measure for pediatric prevention • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – process measure • Precision – high as process measure • Minimum bias – not affected by case-mix, selection bias • Construct validity – recognized measure • Fosters real quality improvement – actionable measure • Application – NYS DOH measure
Obesity - Percentage of children over 2 years of age and less than 18 years of age who have had at least one (1) height and weight taken upon visit with BMI calculated during measurement period Measure Result Source – QDC Data Source - EHR	Obesity screening is consistent with AAP preventive guidelines (http://aapredbook.aappublications.org/resources/IZSchedule0-6yrs.pdf). • Importance – major preventive care measure • Scientific soundness – Proven quality measure for pediatric prevention • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – process measure • Precision – highly accepted process measure • Minimum bias – minimally affected by demographic factors • Construct validity – recognized measure • Fosters real quality improvement – actionable measure • Application – used to identify patients requiring obesity counseling.

Pediatrics – Prevention – Phase 2	
Measure	**Rationale**
Immunizations - Percentage of patients with complete childhood immunization status by age 2 - four DtaP/DT, three IPV, 1 MMR, 3 H influenza, type B, 1 chicken pox (VZV), 4 pneumococcal conugate, Measure Result Source - TBD Data Source - TBD	Immunizations are a widely recognized prevention measure. Collection of accurate immunization records is difficult due to the lack of medical record interoperability among immunization point of care sites. Accurate data collection requires a well-run immunization registry. The implementation of medical homes in practices will assist in improving the accuracy of records. Therefore, this measure is being implemented in Phase II to allow for the establishment of medical homes in practices and improvement on interoperability. It is recognized that implementation of these steps does not correct errors due to their absence in the past, it is expected that records will become more accurate over time and therefore should be considered as a quality measure. • Importance – major preventive care measure • Scientific soundness – Proven quality measure for pediatric prevention • Feasibility – available in EMRs; ease of electronic data exchange recognizing gaps in this exchange • Face validity – outcome measure • Precision – high as outcome measure • Minimum bias – not affected by case-mix, selection bias • Construct validity – recognized measure • Fosters real quality improvement – actionable measure • Application – CDC (ACIP) measure; legal requirement

Pediatrics – Obesity – Phase 1	
Measure	*Rationale*
Obesity Screening - percentage of patients who had height and weight taken upon visit with BMI calculated during yearly measurement period Measure Result Source – QDC Data Source - EHR	Obesity screening is consistent with AAP preventive guidelines (http://aapredbook.aappublications.org/resources/IZSchedule0-6yrs.pdf). • Importance – major preventive care measure • Scientific soundness – Proven quality measure for pediatric prevention • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – process measure • Precision – highly accepted process measure • Minimum bias – minimally affected by demographic factors • Construct validity – recognized measure • Fosters real quality improvement – actionable measure • Application – used to identify patients requiring obesity counseling
Obesity Treatment - percentage of patients receiving medical evaluation if BMI greater than or equal to 85th percentile; Testing - blood pressure measurement, HbA1c, lipid profile, fasting glucose. Measure Result Source – QDC Data Source - EHR	Obesity treatment evaluation is based upon obtaining basic laboratory values to identify early-stage clinical problems. The actual treatment of childhood obesity is multidimensional and difficult o measure using simple methods. Therefore, focus is on simple screening tests that indirectly indicate a focus by the physician on health problems that are associated with the disease. • Scientific soundness – Proven quality measure for pediatric prevention • Feasibility – available in EMRs; ease of electronic data exchange • Face validity – process measure • Precision – highly accepted process measure • Minimum bias – minimally affected by demographic factors • Construct validity – recognized measure • Fosters real quality improvement – actionable measure • Application – used to identify patients requiring obesity counseling and closer medical supervision.

Pediatrics – Obesity – Phase 2	
Measure	*Rationale*
Obesity Treatment - percentage of patients who had a BMI greater than or equal to 85th percentile who, with their families, are receiving diet counseling and activity counseling/education Measure Result Source – TBD Data Source - TBD	The actual treatment of childhood obesity is multidimensional and difficult o measure using simple methods. Obesity treatment includes counseling, education and other activities that are not easily captured in an EMR. Therefore, this measure will be evaluated for inclusion in a Phase II revision of measures. • Scientific soundness – Proven treatment modality • Feasibility – available in EMRs after some modification; ease of electronic data exchange • Face validity – process measure • Precision – accepted process measure • Minimum bias – minimally affected by demographic factors • Construct validity – recognized measure • Fosters real quality improvement – actionable measure • Application – treatment modality.

Pediatrics – Asthma – Phase 1	
Measure	*Rationale*
Appropriate Medications - Percentage of patients ages 5 - 18 years who have asthma who are on appropriate medication (inhaled corticosteroids or Singulair) Measure Result Source – QDC Data Source - EHR	Appropriate care for patients with asthma should virtually eliminate the need for these patients to seek care in the ER through the prevention of morbidity associated with disease (e.g., Status asthmaticus). Regular practice/clinic based care should prove less expensive than ER based care. Therefore, tracking of this measure is a good surrogate for cost savings as well as quality. Analysis is compiled from a utilization data warehouse and reported on a physician, practice and regional level. - Scientific soundness – Proven quality measure for pediatric prevention - Feasibility – available in EMRs; ease of electronic data exchange - Face validity – process measure - Precision – highly accepted process measure - Minimum bias – minimally affected by demographic factors - Construct validity – recognized measure - Fosters real quality improvement – actionable measure - Application – used to identify patients requiring obesity counseling and closer medical supervision.

Pediatrics – Asthma – Phase 2	
Measure	*Rationale*
ER Visits - Number of ER visits of patients with DX of asthma and Discharge Dx asthma related during measurement period Measure Result Source – Hospital Data (Treo) Data Source – Hospital Data (Treo)	Appropriate care for patients with asthma should virtually eliminate the need for these patients to seek care in the ER through the prevention of morbidity associated with disease (e.g., Status asthmaticus). Regular practice/clinic based care should prove less expensive than ER based care. Therefore, tracking of this measure is a good surrogate for cost savings as well as quality. Analysis is compiled from a utilization data warehouse and reported on a physician, practice and regional level.
ER Visits (Trend) - Number of ER visits of patients with DX of asthma and Discharge Dx asthma related during measurement period and previous period (trend) Measure Result Source – Hospital Data (Treo) Data Source – Hospital Data (Treo)	See above (ER Visits). This will trend utilization.

Pediatrics – Asthma – Phase 2	
Measure	*Rationale*
Admissions - Number of admissions of patients with DX of asthma and Discharge Dx asthma related during measurement period Measure Result Source – Hospital Data (Treo) Data Source – Hospital Data (Treo)	Appropriate care for patients with asthma should virtually eliminate the need for these patients to require hospital admission (e.g., Status asthmaticus). Regular practice/clinic based care should prove less expensive than hospital admissions. Therefore, tracking of this measure is a good surrogate for cost savings as well as quality. Analysis is compiled from a utilization data warehouse and reported on a physician, practice and regional level.
Admissions (Trend) - Number of admissions of patients with DX of asthma and discharge Dx asthma related during measurement period and previous period (trend) Measure Result Source – Hospital Data (Treo) Data Source – Hospital Data (Treo)	See above (Admissions). This will trend utilization.
Cost of Admission - Median cost of admission of patients with DX of asthma and discharge Dx asthma related during measurement period Measure Result Source – TBD Data Source – Payor Data	Appropriate care for patients with asthma should virtually eliminate the need for these patients to require hospital admission (e.g., Status asthmaticus). Regular practice/clinic based care should prove less expensive than hospital admissions. Therefore, tracking of this measure is a good measure of cost savings as well as quality. Analysis is compiled from a payor data warehouse and reported on a physician, practice and regional level.
Cost of Admission (Trend) - Median cost of admission of patients with DX of asthma and discharge Dx asthma related during measurement period and previous period (trend) Measure Result Source – TBD Data Source – Payor Data	See above (Cost of Admissions). This will trend costs.

Appendix – Guidelines

Guideline - Diabetes Management in Adult Patients

Bibliographic Sources:
Developed by the New York Diabetes Coalition in collaboration with the New York State Department of Health, Diabetes Prevention & Control Program

Based on American Diabetes Association Clinical Practice Recommendations, view www.diabetes.org for full recommendations

Guideline Status
December 20, 2008

Brief Summary Content:
Diabetes affects 23.6 million children and adults in the United States, 7.8% of the population have diabetes. Diabetes was the seventh leading cause of death listed on U.S. death certificates in 2006. This ranking is based on the 72,507 death certificates in 2006 in which diabetes was listed as the underlying cause of death. According to death certificate reports, diabetes contributed to a total of 233,619 deaths in 2005, the latest year for which data on contributing causes of death are available.

Complications associated with diabetes include heart disease and stroke, high blood pressure, blindness, kidney disease, neuropathy and amputation.

The total costs of diagnosed diabetes in the United States in 2007 were $174 billion: $116 billion for direct medical costs and $58 billion for indirect costs (disability, work loss, premature mortality). After adjusting for population age and sex differences, average medical expenditures among people with diagnosed diabetes were 2.3 times higher than what expenditures would be in the absence of diabetes.

Recommendation:
All adults diagnosed with diabetes will receive standard treatment plan to ensure optimized care.

Goals:
1. Glycated Hemoglobin (HbA1c) Control
   - No more than 15% of patients have a HbA1c value > 9.0%
   - At least 60% of patients have a HbA1c value of < 8.0 %
   - At least 40% of patients have a HbA1c value of < 7.0 %
2. Blood Pressure Control
   - No more than 35% of patients have blood pressure > 140/90 mm Hg
   - At least 25% of patients have blood pressure < 130/80 mm Hg
3. Eye Examination
   - At least 60% of patients have annual retinal screening with documentation of date (If no exam in past year can look back an additional 12 months to see if exam was done and screening was negative for retinopathy.)
4. Smoking Status and Cessation Advice
   - At least 80% of patients have documentation of their smoking status and receive cessation advice or treatment if they are a smoker

5. Lipid Control
   - No more than 37% of patients have an LDL > 130 mg/dl
   - At least 36% of patients have an LDL < 100 mg/dl
6. Nephropathy Assessment
   - At least 80% of patients have microalbuminuria testing or positive urinalysis or medical attention for nephropathy with documentation of date
7. Foot Exam
   - At least 80% of patients have a foot examination, with shoes and socks removed, with documentation of date. Documentation of a podiatry visit within the last year counts as it is assumed that the visit included a foot examination, with shoes and socks removed.

Patient Identification

Patients with diabetes will be diagnosed by history and direct assessment. For inclusion in the measurement aspect of this guideline the patient must meet all of the following criteria:
1. Patient must be between 18 and 75 years of age;
2. Patient must have had a history of diabetes or have been prescribed insulin or oral hypoglycemics/antihyperglycemics for at least 12 months; and
3. Patient must have been under the care of the physician or physician group for at least 12 months.

Patient Treatment

All patients with diabetes will
1. Be seen at least twice a year at the PCP office to monitor and manage symptoms.
2. Have a comprehensive history and physical exam to include a blood pressure, weight and BMI at every visit; annual comprehensive foot exam and annual dilated eye exam; and a dental referral annually.
3. Undergo appropriate labwork including: A1c every 3-6 months, fasting lipid profile/cholesterol annually, urine microalbumin/creatinine ratio annually and serum creatinine annually.
4. Be immunized for seasonal and H1N1 flu annually and pneumovax once.
5. Receive counseling on tobacco use, psychosocial adjustment, sexual functioning, preconception/pregnancy, aspirin therapy and ACE Inhibitor/ARB therapy, where appropriate.
6. Have self-management skills such as physical activity, nutrition, self monitoring blood glucose and self inspection of feet at their initial visit and ongoing as needed

Measurement:

The following measures will be monitored:
1. Glycated Hemoglobin (HbA1c) Control
   - % of patients with a HbA1c value > 9.0%
   - % of patients with a HbA1c value < 8.0 %
   - % of patients with a HbA1c value < 7.0 %
2. Blood Pressure Control
   - % of patients with blood pressure > 140/90 mm Hg
   - % of patients with blood pressure < 130/80 mm Hg
3. Eye Examination
   - % of patients with having an annual retinal screening with documentation of date (or an exam 12 months prior to reporting year if exam was done and screening was negative for retinopathy.)

4. Smoking Status and Cessation Advice
   - % of patients with of patients with documentation of their smoking status and receive cessation advice or treatment if they are a smoker
5. Lipid Control
   - % of patients with an LDL > 130 mg/dl
   - % of patients with an LDL < 100 mg/dl
6. Nephropathy Assessment
   - % of patients having microalbuminuria testing or positive urinalysis or medical attention for nephropathy with documentation of date
7. Foot Exam
   - % of patients having a foot examination, with shoes and socks removed, with documentation of date. Documentation of a podiatry visit within the last year counts as it is assumed that the visit included a foot examination, with shoes and socks removed.

Guideline - Chronic Stable Coronary Artery Disease Management in Adult Patients

Bibliographic Sources:
This Evidence-based clinical practice guideline is based on clinical guidelines from the following:
American College of Cardiology (ACC)/American Heart Association (AHA)
Physician Consortium for Performance Improvement (The Consortium)
For more information and updates visit The Consortium's Web site www.ama-assn.org/go/quality

Guideline Status
December 20, 2008

Brief Summary Content:
Chronic stable coronary artery disease (CAD) is the leading cause of mortality in the United States, accounting for almost 1 in 5 deaths. There are approximately 1 million Americans living with CAD. In the past 2 decades, the number of short-stay hospital discharges for individuals with CAD increased by almost 18%. The total cost of CAD in the United States is approximately $130 billion.

For individuals with CAD, the risk of another heart attack, stroke, and other serious complication is substantial.

Despite potential risks and established clinical guidelines, recent data suggest that some patients are not being managed optimally for this disease including less than optimal numbers of patients being prescribed beta-blockers and angiotensin-converting enzyme (ACE) inhibitor therapy post hospitalization for acute myocardial infarction (AMI) and failure to provide smoking cessation counseling post hospitalization for AMI.

Recommendation:
All adults diagnosed with chronic stable coronary artery disease will receive standard treatment plan to ensure optimized care.

Goals:
1. Blood Pressure Control: 75% of patients will have blood pressure < 140/90 mm Hg on their most current reading
2. Lipid Control:
   * 80% of patients will have a complete lipid profile completed annually
   * At least 50% of patients have an LDL < 100 mg/dl
3. Use of Aspirin or other Antithrombotic: 80% of patients will be prescribed antiplatelet therapy (patients are excluded from this goal if antiplatelet therapy is contraindicated)
4. Smoking Status and Cessation Advice
   * At least 80% of patients have documentation of their smoking status and receive cessation advice or treatment if they are a smoker

Patient Identification

Patients with coronary artery disease will be diagnosed by history and direct assessment. For inclusion in the measurement aspect of this guideline the patient must meet all of the following criteria:

1. Patient is age 35 or older;
2. Patient must have had a history of coronary artery disease for at least 12 months; and
3. Patient must have been under the care of the physician or physician group for at least 12 months.

Patient Treatment

All patients with coronary artery disease will

1. Be seen at least twice a year at the PCP office to assess for anginal symptoms and manage symptoms.
2. Have a blood pressure reading, weight and BMI at every visit.
3. Have a complete lipid profile annually (includes total cholesterol, high-density lipoprotein cholesterol (HDL-C), low-density lipoprotein cholesterol (LDL-C) and triglycerides.)
4. Have smoking status determined at least annually and receive smoking cessation counseling and intervention when recommended.
5. Be prescribed aspirin or another antithrombin in the absence of contraindication.
6. Be prescribed drug therapy to lower LDL-cholesterol if their LDL-C $\geq$ 130 md/dl simultaneously with therapeutic lifestyle changes and control of non-lipid factors.
7. Be prescribed Beta-blocker therapy if they have had a myocardial infarction in the absence of contraindications.
8. Be prescribed ACE inhibitor therapy if they have also been diagnosed with diabetes and/or left ventricular systolic dysfunction (LVSD).
9. Be screened for diabetes (typically by fasting blood glucose or 2 hour glucose tolerance testing). Screening is considered at 3-year intervals.

Measurement:

The following measures will be monitored:

1. Blood Pressure Control
   - % of patients with blood pressure < 140/90 mm Hg
2. Complete lipid profile
   - % of patients with having an annual complete lipid profile
   - % of patients with LDL < 100 mg/dl
3. Use of Aspirin or Another Antithrombic
   - % of patients prescribed aspirin or another antithrombic
4. Smoking Status and Cessation Advice
   - % of patients with documentation of their smoking status
   - % of patient who are smokers who receive cessation advice or treatment

Guideline - Preventive Care in Pediatric Patients

Bibliographic Sources:
MMWR January 8, 2010 / 58(51&52);1-4
http://aapredbook.aappublications.org/resources/IZSchedule0-6yrs.pdf
http://www.health.state.ny.us/publications/2378.pdf

Guideline Status:
April 2, 2010

Brief Summary:
Preventive care guidelines in pediatrics encompasses a broad range of healthcare topics, the following areas will be focused on:
1. Immunizations
2. Obesity screening
3. Lead and anemia testing

Treatment:
All children will receive preventive care as recommended by the American Academy of Pediatrics, the ACIP, and the New York State Department of Health.

Treatment:
1. Childhood Immunizations—(series must be completed by age 2)
   - 4 DTaP/DT (none prior to 42 days of age)
   - 3 IPV (none prior to 42 days of age)
   - 1 MMR
   - 3 HIB (none prior to 42 days of age)
   - 3 hepatitis B
   - 2 hepatitis A
   - 1 VZV, or documented chicken pox disease (or positive serology) occurring prior to 2nd birthday
   - 4 pneumococcal conjugate
   - 2-3 rotavirus
   - 2 influenza
2. Obesity: Children between 2 and 18 will have BMI assessments completed at preventive visits
3. Lead screening: Children at age 2 will have had at least one lead screening test, and one anemia screening test

Measures (Goal % determined at the PODs level):
1. Percentage of children who have had at least one lead test by 2 years
2. Percentage of children receiving recommended immunizations by age 2:
   - 4 DTaP/DT (none prior to 42 days of age)
   - 3 IPV (none prior to 42 days of age)
   - 1 MMR
   - 3 HIB (none prior to 42 days of age)

- 3 hepatitis B
- 2 hepatitis A
- 1 VZV, or documented chicken pox disease (or positive serology) occurring prior to 2nd birthday
- 4 pneumococcal conjugate
- 2-3 rotavirus
- 2 influenza

Guideline - Obesity Screening and Management in Pediatric Patients

Bibliographic Sources
Prevention and Treatment of Pediatric Obesity: An Endocrine Society Clinical Practice Guideline Based on Expert Opinion; Gilbert P. August, Sonia Caprio, Ilene Fennoy, Michael Freemark, Francine R. Kaufman, Robert H. Lustig, Janet H. Silverstein, Phyllis W. Speiser, Dennis M. Styne, and Victor M. Montori

Brief Summary Content
Obesity is known to occur in up to 18% of children in the United States and is also considered a world-wide epidemic. Obesity in children increases the risk of early onset insulin dependent diabetes, hypertension, non-alcoholic fatty liver and elevated lipid levels in the blood stream. Along with significant psychological and social impact the epidemic of obesity has multiple long term effects in children. Children as young as two years old with a BMI of >95 have an increased risk for adult obesity and the subsequent health problems associated including early morbidity and mortality.

Although BMI may identify some "false positive" obese children who have a high muscle mass, those patients should be identified by the PCP and be excluded from the obesity interventions.

By screening in a systematic fashion and intervening in a consistent and community wide manner, childhood obesity may be treated and adult obesity may be prevented.

Goals
1. Identify and categorize patients at risk and with obesity
2. Decrease the percentage of children entering categories of at risk for obesity, obese, and severely obese.

Diagnosis of Obesity
1. Children between 2 and 18 years old will have height, weight and BMI calculated at all preventive care visits. CDC-derived normative percentiles are the preferred method for the diagnosis of the overweight or obese child.
2. Children will be diagnosed as overweight if the BMI is at least in the 85th percentile but < the 95th percentile and obese if the BMI is at least in the 95th percentile for age and sex.
3. Unless the child's height velocity, assessed in relation to stage of puberty and family background, is attenuated recommend against a routine laboratory evaluation for endocrine causes of obesity in obese children or early to midpubertalobes adolescents are not recommended.
4. Consider referral to a geneticist for children whose obesity has a syndromic etiology, especially in the presence of neurodevelopmental abnormalities. Parents of children who have inexorably gained weight from early infancy and have risen above the 97th percentile for weight by 3 yr of age be informed of the availability of MC4R genetic testing. However, the test is positive in only 2%–4% of such patients who are above the 97th percentile for weight and currently will not alter treatment.
5. Children with a BMI of at least 85% will be evaluated for associated co-morbidities and complications.

Treatment

1. Prescribe and support intensive lifestyle (dietary, physical activity, and behavioral) modification to the entire family and to the patient, in an age-appropriate manner, for all overweight and obesity treatments for children and adolescents.
2. Prescribe and support healthy eating habits such as:
   - Avoiding the consumption of calorie-dense, nutrient-poor foods (e.g. sweetened beverages, sports drinks, fruit drinks and juices, most "fast food," and calorie-dense snacks).
   - Controlling caloric intake through portion control in accordance with the Guidelines of the American Academy of Pediatrics
   - Reducing saturated dietary fat intake for children older than 2 yr of age.
   - Increasing the intake of dietary fiber, fruits, and vegetables.
   - Eating timely, regular meals, particularly breakfast, and avoiding constant "grazing" during the day, especially after school.
3. Prescribe and support 60 min of daily moderate to vigorous physical activity and a decrease in time spent in sedentary activities, such as watching television, playing video games, or using computers for recreation. Screen time should be limited to 1–2 h per day, according to the American Academy of Pediatrics.
4. Educate parents about the need for healthy rearing patterns related to diet and activity. Examples include parental modeling of healthy habits, avoidance of overly strict dieting, setting limits of acceptable behaviors, and avoidance of using food as a reward or punishment and probe for and diagnose unhealthy intrafamily communication patterns and support rearing patterns that seek to enhance the child's self-esteem.
5. Consider pharmacotherapy (in combination with lifestyle modification) if a formal program of intensive lifestyle modification has failed to limit weight gain or to mollify comorbidities in obese children. Overweight children should not be treated with pharmacotherapeutic agents unless significant, severe comorbidities persist despite intensive lifestyle modification. In these children, a strong family history ofT2DM or cardiovascular risk factors strengthens the case for pharmacotherapy. Pharmacotherapy will only be offered by clinicians who are experienced in the use of anti-obesity agents and are aware of the potential for adverse reactions.

Prevention of Childhood Obesity

1. Encourage breast-feeding for a minimum of 6 months.
2. Promote and participate in efforts to educate children and parents by means of ongoing anticipatory guidance about healthy dietary and activity habits and, further, that clinicians encourage school systems to provide adequate health education courses promoting healthy eating habits.
3. Promote and participate in efforts to educate the community about healthy dietary and activity habits.

Social Barriers Considerations
1. Clinicians advocate for regulatory policies designed to decrease the exposure of children and adolescents to the promotion of unhealthy food choices in the community (e.g. by media advertisements targeting children and adolescents).
2. Clinicians advocate that school districts ensure that only nutritionally sound food and drinks are available to children in the school environment, including the school cafeteria and alternative sources of food such as vending machines.
3. Advocate for parental participation in the design of school-based dietary or physical activity programs and that schools educate parents about the rationale for these programs to ensure their understanding and cooperation.
4. Advocate for other community and policymaker plans, programs and incentives.

Measures
1. % of patients who had height and weight taken upon visit with BMI calculated and charted during yearly measurement period.
2. % of patients receiving medical evaluation if BMI greater than or equal to 85th percentile; Testing - blood pressure measurement, lipid profile, and fasting glucose.
3. % of patients who had a BMI greater than or equal to 85th percentile who, with their families, are receiving diet counseling and activity counseling/education

Guideline - Asthma Management in Pediatric Patients

Bibliographic Sources:
NHLBI Clinical Guidelines Expert Panel Report 3 (EPR3): Guidelines for the Diagnosis and Management of Asthma http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.htm

Guideline Status
April 2, 2010

Brief Summary Content:
Asthma is the most common chronic illness in children. These guidelines were created to ensure national standards of asthma care are applied to pediatric patients in the Adirondack Medical Home Pilot.

Children known to have > than 2 courses of systemic steroids in a 6 month period and children with hospitalizations and emergency department visits caused by asthma exacerbations are at risk for more acute exacerbations as well as impairment of quality of life. The methods of care and recommendations focus on reducing those risk factors.

Recommendation:
All children diagnosed with asthma will receive standard treatment plan to ensure optimized care.

Goals:
1. Reduce hospitalizations caused by acute asthma exacerbations
2. Reduce emergency department visits caused by acute asthma exacerbations
3. Decrease use of systemic steroids in children with asthma

Patient Identification
Patients with asthma will be diagnosed by history and direct assessment. The direct assessment may include tools such as a physical exam, peak flow meter assessment, and pulmonary function tests.

Pediatric patients between 5 and 18 years old with a diagnosis of asthma will be identified on an annual basis.

Patient Treatment (See NIH Asthma Guidelines for full treatment summary)
1. Patients who experience symptoms that suggest the diagnosis of asthma will be assessed for the diagnosis.
2. Patients diagnosed with asthma will:
   - Be assessed and monitored for severity using both impairment and risk domains;
   - Have a spirometry measurement (FEV, FVC, FEV,/FVC) in all patients > 5 years old before and after the patient inhales a SABA;
   - Be assessed for self-management skills, including medication administration technique;
   - Be prescribed appropriate pharmacological therapy and peak flow meters based on severity assessment.

- Have a written Asthma Management Plan that is developed in conjunction with the patient's caregiver(s) and ongoing education as needed;
- Have environmental factors and co-morbid conditions assessed and counseling provided to control/reduce exposure; and
- Be monitored at least at 2-6 week intervals until control is achieved.

<u>Measurement:</u>
1. The number of emergency department visits of patients with a diagnosis of asthma and a discharge diagnosis of asthma during the measurement period.
2. The number of emergency department visits of patients with a diagnosis of asthma and a discharge diagnosis of asthma during the measurement period compared to the previous number (trend)
3. The number of admissions of patients with diagnosis of asthma and a discharge diagnosis of asthma during the measurement period.
4. The number of admissions of patients with diagnosis of asthma and a discharge diagnosis of asthma during the measurement period compared to the previous number (trend)
5. The use of appropriate medication in the treatment of asthma, i.e. the percentage of in patients ages 5 - 18 years identified with asthma who received Rx for long term control of asthma (inhaled corticosteroids, cromolyn sodium, nedocromil, leokotriene modifiers, methylxanthines).