THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0

August 2008

The measure information you submit will be shared with NQF's Steering Committees and Technical Advisory Panels to evaluate measures against the NQF criteria of importance to measure and report, scientific acceptability of measure properties, usability, and feasibility. Four conditions (as indicated below) must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards. Not all acceptable measures will be strong—or equally strong—among each set of criteria. The assessment of each criterion is a matter of degree; however, all measures must be judged to have met the first criterion, importance to measure and report, in order to be evaluated against the remaining criteria. References to the specific measure evaluation criteria are provided in parentheses following the item numbers. Please refer to the *Measure Evaluation Criteria* for more information at *www.qualityforum.org* under Core Documents. Additional guidance is being developed and when available will be posted on the NQF website.

Use the tab or arrow (↓→) keys to move the cursor to the next field (or back ←↑). There are three types of response fields:

- drop-down menus - select one response;
- check boxes – check as many as apply; and
- text fields – you can copy and paste text into these fields or enter text; these fields are not limited in size, but in most cases, we ask that you summarize the requested information.

Please note that URL hyperlinks do not work in the form; you will need to type them into your web browser.

Be sure to answer all questions. Fields that are left blank will be interpreted as no or none. Information must be provided in this form. Attachments are not allowed except when specifically requested or to provide additional detail or source documents for information that is summarized in this form. If you have important information that is not addressed by the questions, they can be entered into item #48 near the end of the form.

For questions about this form, please contact the NQF Project Director listed in the corresponding call for measures.

	CONDITIONS FOR CONSIDERATION BY NQF
	Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards.
A (A)	**Public domain or Intellectual Property Agreement signed:** IP Agreement signed and submitted (If no, do not submit) *Template for the Intellectual Property Agreement is available at* **www.qualityforum.org** *under Core Documents.*
B (B)	**Measure steward/maintenance:** Is there an identified responsible entity and process to maintain and update the measure on a schedule commensurate with clinical innovation, but at least every 3 years? Yes, information provided in contact section (If no, do not submit)
C (C)	**Intended use:** Does the intended use of the measure include BOTH public reporting AND quality improvement? Yes (If no, do not submit)
D (D)	**Fully developed and tested:** Is the measure fully developed AND tested? No, testing will be completed within 24 months (If not tested and no plans for testing within 24 months, do not submit)

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August 2008

	(for NQF staff use) **NQF Review #:** EC-013-08 **NQF Project:** National Voluntary Consensus Standards for Ambulatory Care Using Clinically Enriched Administrative Data
	MEASURE SPECIFICATIONS & DESCRIPTIVE INFORMATION
1	**Information current as of** *(date- MM/DD/YY)*: 11/18/08
2	**Title of Measure:** Comprehensive Diabetes Care: HbA1c control (<8.0%)
3	**Brief description of measure [1]:** The percentage of members 18 - 75 years of age with diabetes (type 1 and type 2) who had HbA1c control (<8.0%).
4 (2a)	**Numerator Statement:** Use automated laboratory data to identify the most recent HbA1c test during the measurement year. The member is numerator compliant if the most recent automated HbA1c level is <8.0%. The member is not numerator compliant if the automated result for the most recent HbA1c test is ≥ 8.0% or is missing a result, or if an HbA1c test was not done during the measurement year. **Time Window:** The measurement year. **Numerator Details** (Definitions, codes with description): An organization that uses CPT Category II codes to identify numerator compliance for this indicator must search for all relvent codes and use the most recent code during the measurement year to evaluate whether the member is numerator compliant (3044F and 3045F indicates the member is numerator compliant; 3046F, 3047F indicate the member is not numerator compliant).
5 (2a)	**Denominator Statement:** Members 18 - 75 years of ages with diabetes. There are two methods to identify members with diabetes: pharmacy data and claims/encounter data. The organization must use both to identify the eligible population, but a member only needs to be identified in one to be included in the measure. Members may be identified as having diabetes during the measurement year or the year prior to the measurement year. Method 1: Pharmacy data. Members who were dispensed insulin or oral hypoglycemics/antihyperglycemics during the measurement year or year prior to the measurement year on an ambulatory basis Method 2: Claim/encounter data. Members who had two face-to-face encounters with a diagnosis of diabetes on different dates of service in an outpatient setting or nonacute inpatient setting, or one face-to-face encounter in an acute inpatient or ED setting during the measurement year or the year prior to the measurement year. The organization may count services that occur over both years. **Time Window:** The measurement year or year prior to the measurement year. **Denominator Details** (Definitions, codes with description): Method 1: Prescriptions to Identify Membes with Diabetes: Alpha-glucosidase inhibitors: acarbose, miglitol Amylin analogs: pramlinitide Antidiabetic combinations: glimepiride-pioglitazone, glimepiride-rosiglitazone, glipizide-metformin, glyburide-metformin, metformin-pioglitazone, metformin-rosiglitazone, metformin-sitagliptin Insulin: insulin aspart, insulin aspart-insulin aspart protamine, insulin detemir, insulin glargine, insulin glulisine, insulin inhalation, insulin isophane beef-pork, insulin isophane human, insulin lispro, insulin lispro-insulin lispro protamine, insulin regular beef-pork, insulin regular human, insulin regular pork, insulin zinc beef-pork,insulin zinc extended human, insulin zinc human, insulin zinc pork, insulin isophane pork, insulin isophane-insulin regular Meglitinides:nateglinide, repaglinide

[1] Example of measure description: Percentage of adult patients with diabetes aged 18-75 years receiving one or more A1c test(s) per year.

	Miscellaneous antidiabetic agents: exenatide, pramlintide, sitagliptin Sulfonylureas: acetohexamide,chlorpropamide, glimepiride, glipizide, glyburide, tolazamide, tolbutamide Thiazolidinediones: pioglitazone, rosiglitazone Note: Glucophage/metformin is not included because it is used to treat conditions other than diabetes; members with diabetes on these medications are identified through diagnosis coding only. Method 2: Claims/Encounter Data Codes to Identify Diabetes: ICD-9-CM Diagnosis: 250, 357.2, 362.0, 366.41, 648.0 Codes to identify Visits: Outpatient: CPT: 92002, 92004, 92012, 92014, 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99341-99345, 99347-99350, 99384-99387, 99394-99397, 99401-99404, 99411, 99412, 99420, 99429, 99455, 99456 and UB Revenue: 051x, 0520-0523, 0526-0529, 057x-059x, 077x, 082x-085x, 088x, 0982, 0983 Nonacute inpatient: CPT: 99301-99313, 99315, 99316, 99318, 99321-99328, 99331-99337 and UB Revenue: 0118, 0128, 0138, 0148, 0158, 019x, 0524, 0525, 055x, 066x Acute inpatient: CPT: 99221-99223, 99231-99233, 99238, 99239, 99251-99255, 99261-99263, 99291 and UB Revenue: 010x, 0110-0114, 0119, 0120-0124, 0129, 0130-0134, 0139, 0140-0144, 0149, 0150-0154, 0159, 016x, 020x-022x, 072x, 080x, 0987 ED: CPT: 99281-99285 and UB Revenue: 045x, 0981
6 (2a, 2d)	**Denominator Exclusions:** Members with a diagnosis of polycystic ovaries who did not have any face-to-face encounters with a diagnosis of diabetes, in any setting, during the measurement year or the year prior to the measurement year. Diagnosis can occur at any time in the member's history, but must have occurred by December 31 of the measurement year. Members with gestational or steroid-induced diabetes who did not have any face-to-face encounters with a diagnosis of diabetes, in any setting, during the measurement year or the year prior to the measurement year. Diagnosis can occur during the measurement year or the year prior to the measurement year, but must have occurred by December 31 of the measurement year. **Denominator Exclusion Details** (Definitions, codes with description): Codes to identify exclusions: Polycystic overies ICD-9-CM Diagnosis code: 256.4 Steroid induced ICD-9-CM Diagnosis codes: 251.8, 962.0 Gestational diabetes ICD-9-CM Diagnosis coe: 648.8
7 (2a, 2h)	**Stratification** Do the measure specifications require the results to be stratified? Other ► If "other" describe: This measure is stratifed by product line where the information is available (i.e. Commercial, Medicare, Medicaid). **Identification of stratification variable(s):** **Stratification Details** (Definitions, codes with description):
8 (2a, 2e)	**Risk Adjustment** Does the measure require risk adjustment to account for differences in patient severity before the onset of care? No ► **If yes,** (select one) ► Is there a separate proprietary owner of the risk model? No **Identify Risk Adjustment Variables:** **Detailed risk model:** attached ☐ **OR** Web page URL:
9 (2a)	**Type of Score:** Rate/proportion **Calculation Algorithm:** attached ☐ **OR** Web page URL: **Interpretation of Score** (*Classifies interpretation of score according to whether better quality is*

	associated with a higher score, a lower score, a score falling within a defined interval, or a passing score) Better quality = Higher score ► If "Other", please describe:
10 (2a. 4a, 4b)	**Identify the required data elements**(e.g., primary diagnosis, lab values, vital signs)**:** **Data dictionary/code table** attached ☐ **OR** Web page URL: **Data Quality** (2a) *Check all that apply* ☒ Data are captured from an authoritative/accurate source (e.g., lab values from laboratory personnel) ☒ Data are coded using recognized data standards ☒ Method of capturing data electronically fits the workflow of the authoritative source ☒ Data are available in EHRs ☒ Data are auditable
11 (2a, 4b)	**Data Source and Data Collection Methods** *Identifies the data source(s) necessary to implement the measure specifications. Check all that apply* ☒ Electronic Health/Medical Record ☐ Electronic Clinical Database, Name: ☐ Electronic Clinical Registry, Name: ☒ Electronic Claims ☒ Electronic Pharmacy data ☒ Electronic Lab data ☐ Electronic source – other, Describe: ☐ Paper Medical Record ☐ Standardized clinical instrument, Name: ☐ Standardized patient survey, Name: ☐ Standardized clinician survey, Name: ☐ Other, Describe: Instrument/survey attached ☐ **OR** Web page URL:
12 (2a)	**Sampling** *If measure is based on a sample, provide instructions and guidance on sample size.* **Minimum sample size:** **Instructions:**
13 (2a)	**Type of Measure:** Outcome ► If "Other", please describe: ► If part of a composite or paired with another measure, please identify composite or paired measure
14 (2a)	**Unit of Measurement/Analysis** (*Who or what is being measured*) *Check all that apply.* ☒ Can be measured at all levels ☐ Individual clinician (e.g., physician, nurse) ☐ Group of clinicians (e.g., facility department/unit, group practice) ☐ Facility (e.g., hospital, nursing home) ☐ Integrated delivery system ☐ Health plan ☐ Community/Population ☐ Other (*Please describe*):
15 (2a)	**Applicable Care Settings** *Check all that apply* ☐ Can be used in all healthcare settings ☒ Ambulatory Care (office/clinic) ☐ Behavioral Healthcare ☐ Community Healthcare ☐ Dialysis Facility ☐ Emergency Department ☐ EMS emergency medical services ☒ Health Plan ☐ Home Health ☐ Hospice ☐ Hospital ☐ Long term acute care hospital ☐ Nursing home/ Skilled Nursing Facility (SNF) ☐ Prescription Drug Plan ☐ Rehabilitation Facility ☐ Substance Use Treatment Program/Center ☐ Other (*Please describe*):
	IMPORTANCE TO MEASURE AND REPORT
	Note: This is a threshold criterion. If a measure is not judged to be sufficiently important to measure and report, it will not be evaluated against the remaining criteria.
16 (1a)	**Addresses a Specific National Priority Partners Goal** *Enter the numbers of the specific goals related to this measure (see list of goals on last page)*: 2.2
17 (1a)	**If not related to NPP goal, identify high impact aspect of healthcare** (select one) **Summary of Evidence:**

	Citations[2] for Evidence:
18 (1b)	**Opportunity for Improvement** *Provide evidence that demonstrates considerable variation, or overall poor performance, across providers.* **Summary of Evidence:** Diabetes is a chronic condition that requires continuous medical care and patient self-management education to prevent acute complications and to reduce the risk of long term complications. (ADA, 2007) The term "diabetes mellitus" (DM) encompasses a group of metabolic diseases which result in hyperglycemia due to defects in insulin secretion and/or action (The Expert Committee, 1997). There are 20.8 million children and adults in the United States, or 7% of the population, who have diabetes. An estimated 14.6 million have been diagnosed with diabetes, while an estimated 6.2 million people (or nearly one-third) are unaware that they have the disease (ADA All About Diabetes, 2008). The total annual economic cost of diabetes in 2007 was estimated to be $174 billion. Medical expenditures totaled $116 billion and were comprised of $27 billion for diabetes care, $58 billion for chronic diabetes-related complications, and $31 billion for excess general medical costs. Indirect costs resulting from increased absenteeism, reduced productivity, disease-related unemployment disability, and loss of productive capacity due to early mortality totaled $58 billion (ADA All About Diabetes, 2008). Diabetes of either type may cause life-threatening or life-ending complications. Complications of diabetes include metabolic abnormalities, micro and macrovascular disorders, blindness, neuropathy and renal insufficiency. Diabetic morbidity produces significantly increased health utilization and disability among those afflicted (Harris, 1995). Hemoglobin A1c. Hemoglobin A1c tests measure the amount of glycosylated hemoglobin in your blood, this test is a good estimate of how well diabetes is being managed over a 2 to 3 month period. (ADA, 2007) Studies in the United States and abroad have found that improved glycemic control benefits people with either type 1 or type 2 diabetes. In general, every percentage point drop in A1C blood test results (e.g., from 8.0% to 7.0%) reduces the risk of microvascular complications (eye, kidney, and nerve diseases) by 40% (ADA, 2007). Research studies in the United States and abroad have shown that improved glycemic control benefits people with either Type 1 or Type 2 diabetes for microvascular complications of diabetes such as retinopathy, nephropathy and neuropathy (ADA, 2004). **Citations for Evidence:** American Diabetes Association. Standards of Medical Care in Diabetes – 2007. Diabetes Care. January 2007; Volume 30. Suppl. 1:S4-41. American Diabetes Association. Complications of Diabetes in the United States. 2007. Available from http://www.diabetes.org/diabetes-statistics/complications.jsp. American Diabetes Association (ADA): Clinical Practice Recommendations 2004. Standards of Medical Care for Patients with Diabetes Mellitus (Position Statement). Diabetes Care. 2004;27 (suppl 1):15-35. Harris MI. "Summary", in Diabetes in America, 2nd ed. Bethesda: National Institutes of Health -National Institute of Diabetes and Digestive and Kidney Diseases, NIH Publication No. 95-1468, 1995. The Expert Committee on the Diagnosis and Classification of Diabetes Mellitus. Report of the expert committee on the diagnosis and classification of diabetes mellitus. Diabetes Care 20:1183-, 1997.
19 (1b)	**Disparities** *Provide evidence that demonstrates disparity in care/outcomes related to the measure focus among populations.* **Summary of Evidence:** In both Type 1 and Type 2 diabetes demographic and socioeconomic prevalence varies considerably. These factors may result in differences between practices based on the populations served. Race/Ethnicity: Type 1 diabetes is more common in non-Hispanic whites than in African-Americans and Hispanics (in order of decreasing incidence). However, somewhat the reverse is true in Type 2 diabetes. In that condition, prevalence is higher in African-, Hispanic, and Native Americans than in the non-Hispanic white population. [Note: geographic incidence also varies in diabetes, but in Type 1 diabetes 40% of the variation can be explained by the racial distribution in the population]. Race and glycohemoglobin levels. In one of the few studies directly comparing ethnic groups and treatment goals, African-Americans had significantly higher glycohemoglobin levels than Caucasians

[2] Citations can include, but are not limited to journal articles, reports, web pages (URLs).

	treated in the same HMO. This persisted after adjustment for covariates (Wisdom, 1997). Socioeconomic status: Even after controlling for age, Type 2 diabetics as a group have less education and lower income levels than non-diabetics. This remains true at both extremes of the income spectrum (Harris, 1995). Socioeconomic status and glycemic control. Cohort studies of income and educational status demonstrate minor degrees of independent association of these factors with levels of glycohemoglobin maintained (Lloyd, 1993; Bott, 1994). Risk analysis of educational level for glycemic control in Type 2 diabetics in a cross-sectional study did not link this factor to odds of being in the highest quartile for glycohemoglobin levels (Singer, 1995). **Citations for evidence:** Bott U, Jorgens V, Grusser M, et al. Predictors of glycemic control in type 1 diabetic patients after participation in an intensified treatment and teaching program. Diabet Med 11(4):362-71, 1994. Harris MI. "Summary", in Diabetes in America, 2nd ed. Bethesda: National Institutes of Health -National Institute of Diabetes and Digestive and Kidney Diseases, NIH Publication No. 95-1468, 1995. Lloyd CE, Wing RR, Orchard TJ, Becker DJ. Psychosocial correlates of glycemic control: the Pittsburgh Epidemiology of Diabetes Complications (EDC) Study. Diabetes Res Clin Pract 21(2-3):187-95, 1993. Singer DE, Nathan DM, Anderson KM, et al. Association of HbA1c with prevalent cardiovascular disease in the original cohort of the Framingham Heart Study. Diabetes 41(2):202-8, 1992. Wisdom K, Fryzek JP, Havsted SL, et al. Comparison of laboratory test frequency and test results between African-Americans and Caucasians with diabetes: opportunity for improvement. Findings from a large urban health maintenance organization. Diabetes Care 20(6):971-7, 1997.
20 (1c)	**If measuring an Outcome** Describe relevance to the national health goal/priority, condition, population, and/or care being addressed: Recent studies (ACCORD, ADVANCE and VADT) have raised questions about the value of aggressive HbA1c control. The evidence suggests that the benefit for control of HbA1c under 7% is for microvascular rather than macrovascular complications and the group with the most benefit and least risk are younger and earlier in the stage of their diabetes. The evidencase also supports the benefit from avoiding microvascular progression requires 10-20 years to begin to be manifest with respect to important patient outcomes. Overall the trial data (the best evidence available) indicates that the safest control level across the vast majority of persons with diabetes is somewhere between 7-8%. Below is a summary of each of the study findings. ACCORD Study: • Increased cardiovascular-related mortality rate among high-risk patients in the treatment arm (intensive treatment arm discontinued) • Aggressive and intensive treatment of A1c levels to below 6.0mg/dl • Patients tended to be older • Were selected into the trial specifically because they had established complications / risk factors • Longer duration of diabetes likely to be associated with relatively poorly control of baseline A1c levels • Using medication combinations and dosing beyond what is used even in academic endocrinology practices ADVANCE Study • Did not show increased mortality among those patients receiving aggressive treatment to lower blood glucose, nor any benefit. • less aggressive in the timing and degree of lowering of A1c, • population included was younger on average • had fewer CV complications at baseline • targeted other CV risk factor reductions (BP etc) VADT Study (preliminary results) • similar to ADVANCE trial in that no benefit or harm in terms of cardiovascular disease was shown from more intensive treatment (not powered to show microvascular effects)

	Previous Studies: Older trials, on which the original decision to create the <7 measure were based, have shown convincing evidence of a reduction in the microvascular (blindness, renal failure etc) complications of diabetes but are, like the newer trials, somewhat equivocal in documenting effects of A1c lowering on macrovascular complications. Citations: Jenny-Avital E. R., Luan F. L., Nguyen K., Tobey T. A., Parashar A., Byington R. P., Gerstein H. C., Friedewald W. T., Patel A., MacMahon S., Chalmers J., Effects of Intensive Glucose Control in Type 2 Diabetes. N Engl J Med 2008; 359:1519-1521, Oct 2, 2008. The ADVANCE Collaborative Group. Intensive Blood Glucose Control and Vascular Outcomes in Patients with Type 2 Diabetes. NEJM; Vol 358 Num 28:2560-2572, June 12, 2008. **If not measuring an outcome, provide evidence supporting this measure topic and grade the strength of the evidence** *Summarize the evidence (including citations to source) supporting the focus of the measure as follows:* • Intermediate outcome – evidence that the measured intermediate outcome (e.g., blood pressure, Hba1c) leads to improved health/avoidance of harm or cost/benefit. • Process – evidence that the measured clinical or administrative process leads to improved health/avoidance of harm and if the measure focus is on one step in a multi-step care process, it measures the step that has the greatest effect on improving the specified desired outcome(s). • Structure – evidence that the measured structure supports the consistent delivery of effective processes or access that lead to improved health/avoidance of harm or cost/benefit. • Patient experience – evidence that an association exists between the measure of patient experience of health care and the outcomes, values and preferences of individuals/ the public. • Access – evidence that an association exists between access to a health service and the outcomes of, or experience with, care. • Efficiency– demonstration of an association between the measured resource use and level of performance with respect to one or more of the other five IOM aims of quality. **Type of Evidence** *Check all that apply* ☒ Evidence-based guideline ☐ Quantitative research studies ☐ Meta-analysis ☐ Qualitative research studies ☒ Systematic synthesis of research ☐ Other (*Please describe*): **Overall Grade for Strength of the Evidence**[3] (*Use the USPSTF system, or if different, also describe how it relates to the USPSTF system)*: **Summary of Evidence** (*provide guideline information below*)**:** **Citations for Evidence:**
21 (1c)	**Clinical Practice Guideline** *Cite the guideline reference; quote the specific guideline recommendation related to the measure and the guideline author's assessment of the strength of the evidence; and summarize the rationale for using this guideline over others.* **Guideline Citation:**

[3]The strength of the body of evidence for the specific measure focus should be systematically assessed and rated, e.g., USPSTF grading system www.ahrq.gov/clinic/uspstmeth.htm: A - The USPSTF recommends the service. There is high certainty that the net benefit is substantial. B - The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial. C - The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is at least moderate certainty that the net benefit is small. Offer or provide this service only if other considerations support the offering or providing the service in an individual patient. D - The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. I - The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

	American Association of Clinical Endocrinologists and American College of Endocrinology. The American Association of Clinical Endocrinologists Medical Guidelines for the Management of Diabetes Mellitus: The AACE System of Intensive Diabetes Self-Management—2002 Update. Endocrine Practice. Jan/Feb 2002;8(1). American Diabetes Association (ADA): Clinical Practice Recommendations 2004. Standards of Medical Care for Patients with Diabetes Mellitus (Position Statement). Diabetes Care. 2004;27 (suppl 1):15-35. California Healthcare Foundation/American Geriatrics Society (AGS) Improving Care of Elders with Diabetes. Guidelines for Improving the Care of the Older Person with Diabetes Mellitus. J Am Geriatr Soc 2003;51:S265-S280. Available at http://ww.americangeriatrics.org/education/diabetes_executive_summary.shtml. Accessed September 2004. **Specific guideline recommendation:** HbA1c Control Recommendations (These are current recommendations, but are being reevaluated by the specialty societies given the recent release of clinical trial data related to HbA1c control): American Association of Clinical Endocrinologists/American College of Endocrinology (AACE/ACE): • Recommend that a glycosylated hemoglobin be performed during an initial assessment and during follow-up assessments, which should occur at no longer than three-month intervals (AACE/ACE, 2002 and 2000). • Recommend that A1c be universally adopted as the primary method of assessment of glycemic control. On the basis of data from multiple interventional trials, the target for attainment of glycemic control should be A1c values ≤6.5%. (AACE/ACE, 2002 and 2000). American Diabetes Association (ADA): • Recommends obtaining a glycosylated hemoglobin during an initial assessment and then routinely as part of continuing care. In the absence of well-controlled studies that suggest a definite testing protocol, expert opinion recommends glycosylated hemoglobin be obtained at least twice a year in patients who are meeting treatment goals and who have stable glycemic control and more frequently (quarterly assessment) in patients whose therapy was changed or who are not meeting glycemic goals. (Level of evidence: E) (ADA, 2004) • Because different assays can give varying glycated hemoglobin values, the ADA recommends that laboratories only use assay methods that are certified as traceable to the Diabetes Control and Complications Trial A1c reference method. The ADA's goal for glycemic control is A1c <7% with individualized goals for certain subpopulations of patients with chronic conditions. (Level of evidence: B) (ADA, 2004) American Geriatrics Society (AGS): • Monitor and treat hyperglycemia, with a target A1C of 7%, but less stringent goals for therapy may be appropriate once patient preferences, diabetes severity, life expectancy and functional status have been considered (AGS, 2004). **Guideline author's rating of strength of evidence** (*If different from USPSTF, also describe it and how it relates to USPSTF)*: Evidence strength/grades align with USPSTF grading definitions. **Rationale for using this guideline over others:** The guidelines included are evidence-based, applicable to relevant providers, and developed by national specialty organizations and government agencies.
22 (1c)	**Controversy/Contradictory Evidence** *Summarize any areas of controversy, contradictory evidence, or contradictory guidelines and provide citations.* **Summary:** See details on multiple study results under section 20. **Citations:**
23 (1)	**Briefly describe how this measure (as specified) will facilitate significant gains in healthcare quality related to the specific priority goals and quality problems identified above:** Glycohemoglobin monitoring plays a central role in management of hyperglycemia in diabetics, and there is evidence to substantiate that such control reduces the incidence of complications. As a result, the frequency of glycohemoglobin testing and control have strategic implications in the care of members with

	diabetes.
	SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES
	Note: Testing and results should be summarized in this form. However, additional detail and reports may be submitted as supplemental information or provided as a web page URL. If a measure has not been tested, it is only potentially eligible for time-limited endorsement.
24	**Supplemental Testing Information:** attached ☐ **OR** Web page URL:
25 (2b)	**Reliability Testing** **Data/sample:** **Analytic Method:** **Testing Results:**
26 (2c)	**Validity Testing** **Data/sample:** **Analytic Method:** **Testing Results:**
27 (2d)	**Measure Exclusions** *Provide evidence to justify exclusion(s) and analysis of impact on measure results during testing.* **Summary of Evidence supporting exclusion(s):** **Citations for Evidence:** **Data/sample:** **Analytic Method:** **Testing Results:**
28 (2e)	**Risk Adjustment Testing** *Summarize the testing used to determine the need (or no need) for risk adjustment and the statistical performance of the risk adjustment method.* **Data/sample:** **Analytic Method:** **Testing Results:** ►**If outcome or resource use measure not risk adjusted, provide rationale:**
29 (2g)	**Testing comparability of results when more than 1 data method is specified** (*e.g., administrative claims or chart abstraction*) **Data/sample:** **Analytic Method:** **Results:**
30 (2f)	**Provide Measure Results from Testing or Current Use** (select one) **Data/sample:** The denominator of the measure and the collection of poor control >9% has been implemented for some time. The collection of <8% is a new threshold. Data will be received from plans for the first time in the summer of 2009.

	Methods to identify statistically significant and practically/meaningfully differences in performance: **Results:**
31 (2h)	**Identification of Disparities** ►If measure is stratified by factors related to disparities (i.e. race/ethnicity, primary language, gender, SES, health literacy), **provide stratified results:** ►If disparities have been reported/identified, but measure is not specified to detect disparities, provide rationale:
	USABILITY
32 (3)	**Current Use** In use **If in use, how widely used** Nationally ► If "other," please describe: ☐ Used in a public reporting initiative, name of initiative: Sample report attached ☐ **OR** Web page URL:
33 (3a)	**Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **Data/sample:** **Methods:** **Results:**
34 (3b, 3c)	**Relation to other NQF-endorsed™ measures** ►Is this measure similar or related to measure(s) already endorsed by NQF (on the same topic or the same target population)? *Measures can be found at www.qualityforum.org under Core Documents.* *Check all that apply* ☐ Have not looked at other NQF measures ☒ Other measure(s) on same topic ☒ Other measure(s) for same target population ☐ No similar or related measures **Name of similar or related NQF-endorsed™ measure(s):** NCQA Comprehensive Diabetes Care measure. **Are the measure specifications harmonized with existing NQF-endorsed™ measures?** Partially harmonized ►If not fully harmonized, provide rationale: The denominator of the measure and the collection of poor control >9% has been implemented for some time. The collection of <8% is a new threshold. Data will be received from plans for the first time in the summer of 2009. **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** Glycohemoglobin testing and control directly impact the care of members with diabetes. This indicator will continue to focus on the appropriate care for members with diabetes and will allow the flexibility needed in thecare for patients with different comorbidities and risk factors.
	FEASIBILITY
35 (4a)	**How are the required data elements generated?** *Check all that apply* ☐ Data elements are generated concurrent with and as a byproduct of care processes during care delivery (e.g., blood pressure or other assessment recorded by personnel conducting the assessment) ☐ Data elements are generated from a patient survey (e.g., CAHPS) ☒ Data elements are generated through coding performed by someone other than the person who obtained the original information (e.g., DRG or ICD-9 coding on claims) ☐ Other, Please describe:
36	**Electronic Sources** All data elements ►**If all data elements are not in electronic sources, specify the near-term path to electronic collection**

(4b)	**by most providers:** ►**Specify the data elements for the electronic health record:**
37 (4c)	**Do the specified exclusions require additional data sources beyond what is required for the other specifications?** No ►**If yes, provide justification:**
38 (4d)	**Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure:** **Describe how could these potential problems be audited:** **Did you audit for these potential problems during testing?** (select one) **If yes, provide results:**
39 (4e)	**Testing feasibility** Describe what have you learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues: This indicator is an addition to the overall NCQA Comprehensive diabetes measure that has been tested, collected and publicly reported for many years. This indicator is a first year indicator that will be reviewed after the HEDIS data collection has been completed.
	CONTACT INFORMATION
40	**Web Page URL for Measure Information** *Describe where users (implementers) should go for more details on specifications of measures, or assistance in implementing the measure.* **Web page URL:** www.ncqa.org
41	**Measure Intellectual Property Agreement Owner Point of Contact** **First Name:** Philip **MI:** **Last Name:** Renner **Credentials (MD, MPH, etc.):** MBA **Organization:** National Committee for Quality Assurance **Street Address:** 1100 13th Street NW, Suite 1000 **City:** Washington **State:** DC **ZIP:** 20005 **Email:** renner@ncqa.org **Telephone:** 202-955-5192 ext:
42	**Measure Submission Point of Contact** **If different than IP Owner Contact** **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):** **Organization:** **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext:
43	**Measure Developer Point of Contact** **If different than IP Owner Contact** **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):** **Organization:** **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext:
44	**Measure Steward Point of Contact** **If different than IP Owner Contact** *Identifies the organization that will take responsibility for updating the measure and assuring it is consistent with the scientific evidence and current coding schema; the steward of the measure may be different than the developer.* **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):** **Organization:** **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext
	ADDITIONAL INFORMATION
45	**Workgroup/Expert Panel involved in measure development** Workgroup/panel used ►If workgroup used, describe the members' role in measure development: The task of the measurement advisory panel was to support NCQA create a measure that is clinically sound and feasible to collect. This

	particular group helped NCQA work through two contorversial studies which put the HbA1c control < 7.0% and HbA1c control > 9.0%. ►Provide a list of workgroup/panel members' names and organizations: Diabetes Measurement Advisory Panel: • Harlan Krumholz, Yale University (chair) • Tom Lee, Partners Healthcare System (CPM co-chair) • Sheldon Greenfield, UC Irvine (general internal medicine) • James Rosenzweig, Boston University (endocrinology) • John Buse, UNC (endocrinology, ACCORD investigator) • Richard Hellman, AACE (endocrinology) • Joe Selby, Kaiser Permanente (health services researcher) • Denise Simons-Morton, NHLBI (ACCORD project leader) • Ted Ganiats, UCSD (family practice) • Judith Fradkin, NIDDK • Rodney Hayward, VA (VADT study investigator) • David Nathan, Partners Healthcare System (ADVANCE study investigator) • Sue Kirkman (ADA)
46	**Measure Developer/Steward Updates and Ongoing Maintenance** Year the measure was first released: 2008 Month and Year of most recent revision: October 2008 What is the frequency for review/update of this measure? This is a first year indicator for the Comprehensive Diabetes Care measure. This data collected for HEDIS 2009 will undergo a first year analysis. When is the next scheduled review/update for this measure? This measure will be review the summer of 2009 once the HEDIS data is submitted.
47	**Copyright statement/disclaimers:** These performance measures were developed and are owned by the National Committee for Quality Assurance ("NCQA"). These performance measures are not clinical guidelines and do not establish a standard of medical care. NCQA makes no representations, warranties, or endorsement about the quality of any organization or physician that uses or reports performance measures and NCQA has no liability to anyone who relies on such measures. NCQA holds a copyright in these measures and can rescind or alter these measures at any time. Users of the measures shall not have the right to alter, enhance, or otherwise modify the measures and shall not disassemble, recompile, or reverse engineer the source code or object code relating to the measures. Anyone desiring to use or reproduce the measures without modification for a noncommercial purpose may do so without obtaining any approval from NCQA. All commercial uses must be approved by NCQA and are subject to a license at the discretion of NCQA. ©2007 National Committee for Quality Assurance, all rights reserved. Note: Performance measures developed by NCQA for CMS may look different from the measures solely created and owned by NCQA for NCQA.
48	**Additional Information:**
49	**I have checked that the submission is complete and any blank fields indicate that no information is provided.** ☒
50	**Date of Submission** (*MM/DD/YY*)**:** 11/19/08

PATIENT & FAMILY ENGAGEMENT

PRIORITY STATEMENT: Engage Patients and Their Families in Managing Their Health and Making Decisions About Their Care

1.1. All providers will routinely solicit and publicly report on their patients' perspectives of care

1.2. All providers will work collaboratively with their patients to assist them in making informed decisions about treatment options consistent with their values and preferences

POPULATION HEALTH

PRIORITY STATEMENT: IMPROVE THE HEALTH OF THE U.S. POPULATION

2.1. The population will be up to date on all high-priority age- and gender-appropriate evidence-based clinical preventive services

2.2. The population will receive recommended evidence-based interventions to improve targeted healthy lifestyle behaviors

2.3. All communities will demonstrate a 10% improvement in their community index of health

2.4. Americans will have all recommended high priority healthy lifestyle behaviors under control

SAFETY

PRIORITY STATEMENT: IMPROVE THE SAFETY OF THE U.S. HEALTH CARE SYSTEM

3.1. All providers will drive all preventable healthcare-associated infections (HAI) to zero

3.2. All providers will drive the incidence of preventable NQF Serious Reportable Events (SRE) to zero

3.3. All hospitals will reduce preventable and premature mortality rates to best-in-class

3.4. All hospitals and their community partners will reduce 30-day mortality rates following hospitalization for select conditions to best-in-class

PALLIATIVE CARE

PRIORITY STATEMENT: GUARANTEE APPROPRIATE AND COMPASSIONATE CARE FOR PATIENTS WITH LIFE-LIMITING ILLNESSES

4.1. All providers will identify, document, and effectively treat physical symptoms (e.g. pain, shortness of breath, constipation, others) at levels acceptable to patients with a life-limiting illness

4.2. All providers will effectively address the psychosocial and spiritual needs of patients with life-limiting illnesses and their families according to their preferences

4.3. All eligible patients will receive high quality palliative care and hospice services

CARE COORDINATION

PRIORITY STATEMENT: ENSURE PATIENTS RECEIVE WELL-COORDINATED CARE ACROSS ALL PROVIDERS, SETTINGS, AND LEVELS OF CARE

5.1. All providers will accurately and completely reconcile medications across the continuum of care (i.e. admission, transfer within and between care providers, discharge, and outpatient appointments) and ensure communication with the next provider of services

5.2. All inpatient and outpatient providers will assess the patient's perspective of the coordination of their care using a validated care coordination survey tool

5.3. All providers will reduce 30-day all-cause readmission rates resulting from poorly coordinated care to best-in-class

5.4. All providers will reduce preventable emergency department (i.e. those that could be avoided with timely access to primary care) visits resulting from poorly coordinated care by 50%

PATIENT-FOCUSED CARE

PRIORITY STATEMENT: GUARANTEE HIGH VALUE CARE ACROSS ACUTE AND CHRONIC EPISODES

6.1. All patients will receive high-value care over the course of their acute or chronic illness

OVERUSE

PRIORITY STATEMENT: ELIMINATE WASTE WHILE ENSURING THE DELIVERY OF APPROPRIATE CARE

7.1. Reduce wasteful and inappropriate care for the top ten targeted areas by 50%

THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0

August 2008

The measure information you submit will be shared with NQF's Steering Committees and Technical Advisory Panels to evaluate measures against the NQF criteria of importance to measure and report, scientific acceptability of measure properties, usability, and feasibility. Four conditions (as indicated below) must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards. Not all acceptable measures will be strong—or equally strong—among each set of criteria. The assessment of each criterion is a matter of degree; however, all measures must be judged to have met the first criterion, importance to measure and report, in order to be evaluated against the remaining criteria. References to the specific measure evaluation criteria are provided in parentheses following the item numbers. Please refer to the *Measure Evaluation Criteria* for more information at *www.qualityforum.org* under Core Documents. Additional guidance is being developed and when available will be posted on the NQF website.

Use the tab or arrow (↓→) keys to move the cursor to the next field (or back ←↑). There are three types of response fields:

- drop-down menus - select one response;
- check boxes – check as many as apply; and
- text fields – you can copy and paste text into these fields or enter text; these fields are not limited in size, but in most cases, we ask that you summarize the requested information.

Please note that URL hyperlinks do not work in the form; you will need to type them into your web browser.

Be sure to answer all questions. Fields that are left blank will be interpreted as no or none. Information must be provided in this form. Attachments are not allowed except when specifically requested or to provide additional detail or source documents for information that is summarized in this form. If you have important information that is not addressed by the questions, they can be entered into item #48 near the end of the form.

For questions about this form, please contact the NQF Project Director listed in the corresponding call for measures.

	CONDITIONS FOR CONSIDERATION BY NQF
	Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards.
A (A)	*Public domain or Intellectual Property Agreement signed: IP Agreement signed and submitted (If no, do not submit)* *Template for the Intellectual Property Agreement is available at www.qualityforum.org under Core Documents.*
B (B)	*Measure steward/maintenance: Is there an identified responsible entity and process to maintain and update the measure on a schedule commensurate with clinical innovation, but at least every 3 years?* *Yes, information provided in contact section (If no, do not submit)*
C (C)	*Intended use: Does the intended use of the measure include BOTH public reporting AND quality improvement? Yes (If no, do not submit)*
D (D)	*Fully developed and tested: Is the measure fully developed AND tested? Yes, fully developed and tested (If not tested and no plans for testing within 24 months, do not submit)*

THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0

August 2008

	(for NQF staff use) NQF Review #: EC-095-08 NQF Project: National Voluntary Consensus Standards for Ambulatory Care Using Clinically Enriched Administrative Data
	MEASURE SPECIFICATIONS & DESCRIPTIVE INFORMATION
1	*Information current as of (date- MM/DD/YY): 6/22/09*
2	*Title of Measure: Adult(s) taking insulin with evidence of self-monitoring blood glucose testing.*
3	**Brief description of measure [1]:** This measure identifies patients with diabetes mellitus taking insulin that had evidence of self-monitoring blood glucose testing in last 12 reported months.
4 (2a)	**Numerator Statement:** Did the patient fill a prescription for any of the following during the following time period: last 12 months of the report period through 90 days after the end of the report period? ▫ Glucometers (RX-175) ▫ Blood Glucose Test Strips (RX-176) **Time Window:** 12 months prior to the end of the report period through 90 days after the end of the report period **Numerator Details** (Definitions, codes with description): see attached "Ingenix DM Code Sets NQF" excel document for codes with descriptions
5 (2a)	**Denominator Statement:** For condition confirmation, the following criteria must be met: 1. All males or females 18-75 years of age at the end of the report period 2. Patient must have been continuously enrolled: Medical benefits throughout the 12 months prior to the end of the report period AND Pharmacy benefit plan for 6 months prior to the end of the report period Note: The standard enrollment break logic allows unlimited breaks of no more than 45 days and no breaks greater than 45 days. 3. Either one of the following criteria (A or B): A. The patient is listed on the Disease Registry Input File for this condition, if a Disease Registry Input File is available. OR B. During the 24 months prior to the end of the report period, did the patient meet any of the following criteria: Patient has 2 or more outpatient or nonacute inpatient encounters (HEDIS) (code set PR0199, RV0199, PR0195, RV0195), where the diagnosis is Diabetes (HEDIS) (code set DX0227) OR Patient has 1 or more acute inpatient or emergency department encounters (HEDIS) (code set PR0330, RV0330, PR0194, RV0194), where the diagnosis is Diabetes (HEDIS) (code set DX0227) OR Patient has 1 or more prescriptions for Insulin or Oral Hypoglycemics/Antihyperglycemics (HEDIS) (code set RX0221) In addition, for this measure, the patient must fill a prescription for Insulin (code set RX-59) during the following time period: last 120 days of the report period through 90 days after the end of the report period?

[1] Example of measure description: Percentage of adult patients with diabetes aged 18-75 years receiving one or more A1c test(s) per year.

	Time Window: 1. The 24 months prior to the end of the report period is used to identify patients with diabetes. 2. The last 120 days of the report period through 90 days after the end of the report period is used to identify insulin using population **Denominator Details** (Definitions, codes with description): see attached "Ingenix DM Code Sets NQF" excel document for codes with descriptions
6 (2a, 2d)	**Denominator Exclusions:** 1. Absence of a prescription for Insulin (code set RX-59) during the following time period: last 120 days of the report period through 90 days after the end of the report period? 2. During the 12 months prior to the end of the report period, did the patient have 1 or more of the following services or events, where the diagnosis was Polycystic Ovaries (code set DX0312), Gestational Diabetes (DX0313), or Steroid-induced Diabetes (DX0314): ▫ Professional Encounter Code Set (code set PR0107, RV0107) ▫ Professional Supervision (code set PR0108) ▫ Facility Event – Confinement/Admission ▫ Facility Event – Emergency Room ▫ Facility Event – Outpatient Surgery **Denominator Exclusion Details** (Definitions, codes with description): see attached "Ingenix DM Code Sets NQF" excel document for codes with descriptions
7 (2a, 2h)	**Stratification** Do the measure specifications require the results to be stratified? No ► If "other" describe: **Identification of stratification variable(s):** **Stratification Details** (Definitions, codes with description):
8 (2a, 2e)	**Risk Adjustment** Does the measure require risk adjustment to account for differences in patient severity before the onset of care? No ► **If yes,** (select one) ► Is there a separate proprietary owner of the risk model? (select one) **Identify Risk Adjustment Variables:** **Detailed risk model:** attached ☐ **OR** Web page URL:
9 (2a)	**Type of Score:** Rate/proportion **Calculation Algorithm:** attached ☒ **OR** Web page URL: **Interpretation of Score** (*Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score*) Better quality = Higher score ► If "Other", please describe:
10 (2a. 4a, 4b)	**Identify the required data elements**(e.g., primary diagnosis, lab values, vital signs)**:** ICD-9 codes (alternatively, a disease registry can be used for this condition to identify patients with diabetes mellitus), CPT codes, Revenue codes, NDC/Pharmacy data **Data dictionary/code table** attached ☒ **OR** Web page URL: **Data Quality** (2a) *Check all that apply* ☐ Data are captured from an authoritative/accurate source (e.g., lab values from laboratory personnel) ☒ Data are coded using recognized data standards ☒ Method of capturing data electronically fits the workflow of the authoritative source ☐ Data are available in EHRs ☒ Data are auditable
11 (2a, 4b)	**Data Source and Data Collection Methods** *Identifies the data source(s) necessary to implement the measure specifications. Check all that apply* ☐ Electronic Health/Medical Record ☐ Paper Medical Record ☐ Electronic Clinical Database, Name: ☐ Standardized clinical instrument, Name: ☐ Electronic Clinical Registry, Name: ☐ Standardized patient survey, Name:

	☒ Electronic Claims ☒ Electronic Pharmacy data ☐ Electronic Lab data ☐ Electronic source – other, Describe: ☐ Standardized clinician survey, Name: ☐ Other, Describe: Instrument/survey attached ☐ **OR** Web page URL:
12 (2a)	**Sampling** *If measure is based on a sample, provide instructions and guidance on sample size.* **Minimum sample size:** not applicable **Instructions:**
13 (2a)	**Type of Measure:** Process ► If "Other", please describe: ► If part of a composite or paired with another measure, please identify composite or paired measure Not applicable
14 (2a)	**Unit of Measurement/Analysis** (*Who or what is being measured*) *Check all that apply.* ☐ Can be measured at all levels ☒ Individual clinician (e.g., physician, nurse) ☒ Group of clinicians (e.g., facility department/unit, group practice) ☐ Facility (e.g., hospital, nursing home) ☒ Integrated delivery system ☒ Health plan ☒ Community/Population ☐ Other (*Please describe*):
15 (2a)	**Applicable Care Settings** *Check all that apply* ☐ Can be used in all healthcare settings ☒ Ambulatory Care (office/clinic) ☐ Behavioral Healthcare ☐ Community Healthcare ☐ Dialysis Facility ☐ Emergency Department ☐ EMS emergency medical services ☐ Health Plan ☐ Home Health ☐ Hospice ☐ Hospital ☐ Long term acute care hospital ☐ Nursing home/ Skilled Nursing Facility (SNF) ☐ Prescription Drug Plan ☐ Rehabilitation Facility ☐ Substance Use Treatment Program/Center ☐ Other (*Please describe*):
	IMPORTANCE TO MEASURE AND REPORT
	Note: This is a threshold criterion. If a measure is not judged to be sufficiently important to measure and report, it will not be evaluated against the remaining criteria.
16 (1a)	**Addresses a Specific National Priority Partners Goal** *Enter the numbers of the specific goals related to this measure (see list of goals on last page)*: 3.2, 6.1, 7.1
17 (1a)	**If not related to NPP goal, identify high impact aspect of healthcare** (select one) **Summary of Evidence:** **Citations[2] for Evidence:**
18 (1b)	**Opportunity for Improvement** *Provide evidence that demonstrates considerable variation, or overall poor performance, across providers.* **Summary of Evidence:** Using a large, geographically diverse benchmark database, where 16,184 members meet the claims-based definition of diabetes mellitus and 2719 members satisfied the denominator definition for this specific measure, compliance was 64%, indicating a clear gap in care and opportunity for care improvement. In December 2008, compliance rates for this measure using a larger benchmark database will be available; this database will consist of a geographically diverse population of 12 million members that represents predominately a commercial population less than 65 year of age. **Citations for Evidence:** IIngenix EBM Connect benchmark results, April 2005
19	**Disparities** *Provide evidence that demonstrates disparity in care/outcomes related to the measure*

[2] Citations can include, but are not limited to journal articles, reports, web pages (URLs).

(1b)	*focus among populations.* **Summary of Evidence:** Not applicable **Citations for evidence:**
20 (1c)	**If measuring an Outcome** Describe relevance to the national health goal/priority, condition, population, and/or care being addressed: not applicable **If not measuring an outcome, provide evidence supporting this measure topic and grade the strength of the evidence** *Summarize the evidence (including citations to source) supporting the focus of the measure as follows:* • Intermediate outcome – evidence that the measured intermediate outcome (e.g., blood pressure, Hba1c) leads to improved health/avoidance of harm or cost/benefit. • Process – evidence that the measured clinical or administrative process leads to improved health/avoidance of harm and if the measure focus is on one step in a multi-step care process, it measures the step that has the greatest effect on improving the specified desired outcome(s). • Structure – evidence that the measured structure supports the consistent delivery of effective processes or access that lead to improved health/avoidance of harm or cost/benefit. • Patient experience – evidence that an association exists between the measure of patient experience of health care and the outcomes, values and preferences of individuals/ the public. • Access – evidence that an association exists between access to a health service and the outcomes of, or experience with, care. • Efficiency– demonstration of an association between the measured resource use and level of performance with respect to one or more of the other five IOM aims of quality. **Type of Evidence** *Check all that apply* ☒ Evidence-based guideline ☐ Quantitative research studies ☐ Meta-analysis ☐ Qualitative research studies ☐ Systematic synthesis of research ☐ Other (*Please describe*): **Overall Grade for Strength of the Evidence**[3] (*Use the USPSTF system, or if different, also describe how it relates to the USPSTF system)*: Self monitoring of blood glucose (SMBG) is assigned an A level (clear evidence from well-conducted, generalizable, randomized controlled trials that are adequately powered) and E level of evidence recommendation (expert consensus or clinical experience) from the ADA as summarized in item 21 below (1). This recommendation is equivalent to the USPSTF grade A or B classification. **Summary of Evidence** (*provide guideline information below*)**:** Major clinical trials of insulin-treated patients that demonstrated the benefits of intensive glycemic control on diabetes complications have included SMBG as part of multifactorial interventions, suggesting that SMBG is a component of effective therapy. SMBG allows patients to evaluate their individual response to therapy and assess whether glycemic targets are being achieved. Results of SMBG can be useful in preventing hypoglycemia and adjusting medications (particularly prandial insulin doses), MNT, and physical activity. The frequency and timing of SMBG should be dictated by the particular needs and goals of the patients. SMBG is especially important for patients treated with insulin to monitor for and prevent asymptomatic hypoglycemia and hyperglycemia (1). **Citations for Evidence:** 1. American Diabetes Association. Standards of Medical Care in Diabetes - 2008. Diabetes Care 2008;31

[3]The strength of the body of evidence for the specific measure focus should be systematically assessed and rated, e.g., USPSTF grading system www.ahrq.gov/clinic/uspstmeth.htm: A - The USPSTF recommends the service. There is high certainty that the net benefit is substantial. B - The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial. C - The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is at least moderate certainty that the net benefit is small. Offer or provide this service only if other considerations support the offering or providing the service in an individual patient. D - The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. I - The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

	(suppl 1):S12-54.
21 (1c)	**Clinical Practice Guideline** *Cite the guideline reference; quote the specific guideline recommendation related to the measure and the guideline author's assessment of the strength of the evidence; and summarize the rationale for using this guideline over others.* **Guideline Citation:** 1. American Diabetes Association. Standards of Medical Care in Diabetes - 2008. Diabetes Care 2008;31 (suppl 1):S12-54. **Specific guideline recommendation:** SMBG should be carried out three or more times daily for patients using multiple insulin injections or insulin pump therapy. (A Level of Evidence recommendation). For patients using less frequent insulin injections, noninsulin therapies, or medical nutrition therapy (MNT) alone, SMBG may be useful in achieving glycemic goals. (E) **Guideline author's rating of strength of evidence** (*If different from USPSTF, also describe it and how it relates to USPSTF)*: Self monitoring of blood glucose (SMBG) is assigned an A level (clear evidence from well-conducted, generalizable, randomized controlled trials that are adequately powered) and E level of evidence recommendation (expert consensus or clinical experience) from the ADA as summarized above (1). This recommendation is equivalent to the USPSTF grade A or B classification. **Rationale for using this guideline over others:** There are no other national guidelines that address the frequency of SMBG in this specific population.
22 (1c)	**Controversy/Contradictory Evidence** *Summarize any areas of controversy, contradictory evidence, or contradictory guidelines and provide citations.* **Summary:** The optimal frequency and timing of SMBG for patients with type 2 diabetes on noninsulin therapy is not known but should be sufficient to facilitate reaching glucose goals. A metaanalysis of SMBG in non-insulin-treated patients with type 2 diabetes concluded that some regimen of SMBG was associated with a reduction in A1C of 0.4%. However, many of the studies in this analysis also included patient education with diet and exercise counseling and, in some cases, pharmacologic intervention, making it difficult to assess the contribution of SMBG alone to improved control. Due to the uncertainty of the value of SMBG monitoring in this specific population, patients not on insulin therapy are excluded from the measure denominator. **Citations:** 1. American Diabetes Association. Standards of Medical Care in Diabetes - 2008. Diabetes Care 2008;31 (suppl 1):S12-54.
23 (1)	**Briefly describe how this measure (as specified) will facilitate significant gains in healthcare quality related to the specific priority goals and quality problems identified above:** SMBG offers the opportunity for improved diabetic control. In addition, it can reduce life threatening complications associated with hypoglycemia and hyperglycemia.
	SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES
	Note: Testing and results should be summarized in this form. However, additional detail and reports may be submitted as supplemental information or provided as a web page URL. If a measure has not been tested, it is only potentially eligible for time-limited endorsement.
24	**Supplemental Testing Information:** attached ☒ **OR** Web page URL:
25 (2b)	**Reliability Testing** **Data/sample:** description attached, see "Testing" document **Analytic Method:** description attached, see "Testing" document **Testing Results:** see item 18 above

26 (2c)	**Validity Testing** **Data/sample:** description attached, see "Testing" document **Analytic Method:** description attached, see "Testing" document **Testing Results:** see item 18 above
27 (2d)	**Measure Exclusions** *Provide evidence to justify exclusion(s) and analysis of impact on measure results during testing.* **Summary of Evidence supporting exclusion(s):** Polycystic ovaries, gestational diabetes, and steroid-induced diabetes are exclusion criteria consistent with the HEDIS diabetes measures. These exclusion criteria were added at the request of the NQF workgroup. **Citations for Evidence:** as above **Data/sample:** **Analytic Method:** **Testing Results:**
28 (2e)	**Risk Adjustment Testing** *Summarize the testing used to determine the need (or no need) for risk adjustment and the statistical performance of the risk adjustment method.* **Data/sample:** not applicable **Analytic Method:** **Testing Results:** ►**If outcome or resource use measure not risk adjusted, provide rationale:**
29 (2g)	**Testing comparability of results when more than 1 data method is specified** (*e.g., administrative claims or chart abstraction*) **Data/sample:** description attached, see "Testing" document **Analytic Method:** **Results:**
30 (2f)	**Provide Measure Results from Testing or Current Use** Results from testing **Data/sample:** see response to item 18 **Methods to identify statistically significant and practically/meaningfully differences in performance:** **Results:**
31 (2h)	**Identification of Disparities** ►If measure is stratified by factors related to disparities (i.e. race/ethnicity, primary language, gender, SES, health literacy), **provide stratified results:** not applicable ►If disparities have been reported/identified, but measure is not specified to detect disparities, provide rationale:
	USABILITY
32	*Current Use In use If in use, how widely used Other ► If "other," please describe: Health plans, physicians (individuals and groups), care management, and other vendors/customers are using this on a*

(3)	*national level.* ☐ *Used in a public reporting initiative, name of initiative:* *Sample report attached* ☐ *OR Web page URL:*
33 (3a)	**Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **Data/sample:** Results are summarized and reported by users/customers depending on their business need. Therefore, this is no single public reporting format. **Methods:** **Results:**
34 (3b, 3c)	**Relation to other NQF-endorsed™ measures** ►Is this measure similar or related to measure(s) already endorsed by NQF (on the same topic or the same target population)? *Measures can be found at www.qualityforum.org under Core Documents.* *Check all that apply* ☐ Have not looked at other NQF measures ☐ Other measure(s) on same topic ☒ Other measure(s) for same target population ☐ No similar or related measures **Name of similar or related NQF-endorsed™ measure(s):** HEDIS® Comprehensive Diabetes Care **Are the measure specifications harmonized with existing NQF-endorsed™ measures?** Partially harmonized ►If not fully harmonized, provide rationale: We use nearly identical condition confirmation for identification of patients with diabetes mellitus. For this measure, we include the HEDIS® lists polycystic ovaries, gestational diabetes, and steroid-induced diabetes exclusion criteria and we use the same age range. We differ in that we allow use of a disease registry for condition confirmation - this allows other data sources to identify the target polulation. **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** This measure identifies diabetic patients taking insulin who are performing recommended SMBG. This adds value to existing NQF endorsed measures by addressing a recommended aspect of care that is not represented by current NQF endorsed measures.
	FEASIBILITY
35 (4a)	*How are the required data elements generated? Check all that apply* ☐ *Data elements are generated concurrent with and as a byproduct of care processes during care delivery (e.g., blood pressure or other assessment recorded by personnel conducting the assessment)* ☐ *Data elements are generated from a patient survey (e.g., CAHPS)* ☒ *Data elements are generated through coding performed by someone other than the person who obtained the original information (e.g., DRG or ICD-9 coding on claims)* ☐ *Other, Please describe:*
36 (4b)	*Electronic Sources All data elements* ►*If all data elements are not in electronic sources, specify the near-term path to electronic collection by most providers:* ►*Specify the data elements for the electronic health record: none are specific to nor dependent on EHR*
37 (4c)	*Do the specified exclusions require additional data sources beyond what is required for the other specifications? No* ►*If yes, provide justification:*
38	*Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure: If blood glucose monitoring supplies are dispensed and the specific claim is not submitted, then a false negative*

(4d)	*result will be generated. The same error type would occur if a large number of test supplies are dispensed more that 12 months before the end of the report period and the patient is still using this supply during the 12 month report period.* *Describe how could these potential problems be audited: A chart review audit could define the frequency of this error type.* *Did you audit for these potential problems during testing? No If yes, provide results:*
39 (4e)	*Testing feasibility Describe what have you learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues: Our denominator exclusion was included in an earlier version of this measure released May 2004. When ADA recommendations changed, this exclusion criteria was removed. However, the exclusion criteria was added back during our most current literature review and measure update this past year. This final modification was precipatated by 2008 ADA guideline changes. The compliance rate for this measure was 64% when the denominator exclusion was included; the compliance rate was 39 % when the exclusion criteria was not included.*
	CONTACT INFORMATION
40	*Web Page URL for Measure Information Describe where users (implementers) should go for more details on specifications of measures, or assistance in implementing the measure.* *Web page URL: To be defined*
41	**Measure Intellectual Property Agreement Owner Point of Contact** **First Name:** Cheri **MI:** **Last Name:** DiGiovanni **Credentials (MD, MPH, etc.):** **Organization:** Ingenix **Street Address:** 1050 Carol Street **City:** Downers Grove **State:** IL **ZIP:** 60516 **Email:** cheri.digiovanni@ingenix.com **Telephone:** 602-276-8913 ext:
42	**Measure Submission Point of Contact** **If different than IP Owner Contact** **First Name:** Kay **MI:** E **Last Name:** Schwebke **Credentials (MD, MPH, etc.):** MD, MPH **Organization:** Ingenix **Street Address:** 12125 Technology Drive **City:** Eden Prairie **State:** MN **ZIP:** 55344 **Email:** kay.schwebke@ingenix.com **Telephone:** 952-833-7154 ext:
43	**Measure Developer Point of Contact** **If different than IP Owner Contact** **First Name:** Kay **MI:** E **Last Name:** Schwebke **Credentials (MD, MPH, etc.):** MD, MPH **Organization:** As above **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext:
44	**Measure Steward Point of Contact** **If different than IP Owner Contact** *Identifies the organization that will take responsibility for updating the measure and assuring it is consistent with the scientific evidence and current coding schema; the steward of the measure may be different than the developer.* **First Name:** Kay **MI:**E **Last Name:**Schwebke **Credentials (MD, MPH, etc.):** MD, MPH **Organization:** As above **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext
	ADDITIONAL INFORMATION
45	**Workgroup/Expert Panel involved in measure development** Workgroup/panel used ►If workgroup used, describe the members' role in measure development: Reviewed relevant research/guideline, participated in the development of measure logic, reviewed code sets, reviewed benchmark results ►Provide a list of workgroup/panel members' names and organizations: see document, "Consultant panel members"

46	*Measure Developer/Steward Updates and Ongoing Maintenance* *Year the measure was first released: May 2004* *Month and Year of most recent revision: March 2008* *What is the frequency for review/update of this measure? Consultant panel review due March 2009, and then every 2-3 years* *When is the next scheduled review/update for this measure? March 2009*
47	**Copyright statement/disclaimers:** see attached "DM ebm Alg" document
48	**Additional Information:** In addition to the attachments referenced above, the following documents are attached. 1. EBM70Technical document 2. EBM70Concepts document Also, our next EBM Connect release, scheduled for November 2008, will include annual code set updates. Therefore, code sets submitted October 2008 might change slightly due to this routine maintenance process. The anticipated impact is minimal.
49	**I have checked that the submission is complete and any blank fields indicate that no information is provided.** ☒
50	**Date of Submission** (*MM/DD/YY*)**:** 6/22/09

PATIENT & FAMILY ENGAGEMENT

PRIORITY STATEMENT: Engage Patients and Their Families in Managing Their Health and Making Decisions About Their Care

1.1. All providers will routinely solicit and publicly report on their patients' perspectives of care

1.2. All providers will work collaboratively with their patients to assist them in making informed decisions about treatment options consistent with their values and preferences

POPULATION HEALTH

PRIORITY STATEMENT: IMPROVE THE HEALTH OF THE U.S. POPULATION

2.1. The population will be up to date on all high-priority age- and gender-appropriate evidence-based clinical preventive services

2.2. The population will receive recommended evidence-based interventions to improve targeted healthy lifestyle behaviors

2.3. All communities will demonstrate a 10% improvement in their community index of health

2.4. Americans will have all recommended high priority healthy lifestyle behaviors under control

SAFETY

PRIORITY STATEMENT: IMPROVE THE SAFETY OF THE U.S. HEALTH CARE SYSTEM

3.1. All providers will drive all preventable healthcare-associated infections (HAI) to zero

3.2. All providers will drive the incidence of preventable NQF Serious Reportable Events (SRE) to zero

3.3. All hospitals will reduce preventable and premature mortality rates to best-in-class

3.4. All hospitals and their community partners will reduce 30-day mortality rates following hospitalization for select conditions to best-in-class

PALLIATIVE CARE

PRIORITY STATEMENT: GUARANTEE APPROPRIATE AND COMPASSIONATE CARE FOR PATIENTS WITH LIFE-LIMITING ILLNESSES

4.1. All providers will identify, document, and effectively treat physical symptoms (e.g. pain, shortness of breath, constipation, others) at levels acceptable to patients with a life-limiting illness

4.2. All providers will effectively address the psychosocial and spiritual needs of patients with life-limiting illnesses and their families according to their preferences

4.3. All eligible patients will receive high quality palliative care and hospice services

CARE COORDINATION

PRIORITY STATEMENT: ENSURE PATIENTS RECEIVE WELL-COORDINATED CARE ACROSS ALL PROVIDERS, SETTINGS, AND LEVELS OF CARE

5.1. All providers will accurately and completely reconcile medications across the continuum of care (i.e. admission, transfer within and between care providers, discharge, and outpatient appointments) and ensure communication with the next provider of services

5.2. All inpatient and outpatient providers will assess the patient's perspective of the coordination of their care using a validated care coordination survey tool

5.3. All providers will reduce 30-day all-cause readmission rates resulting from poorly coordinated care to best-in-class

5.4. All providers will reduce preventable emergency department (i.e. those that could be avoided with timely access to primary care) visits resulting from poorly coordinated care by 50%

PATIENT-FOCUSED CARE

PRIORITY STATEMENT: GUARANTEE HIGH VALUE CARE ACROSS ACUTE AND CHRONIC EPISODES

6.1. All patients will receive high-value care over the course of their acute or chronic illness

OVERUSE

PRIORITY STATEMENT: ELIMINATE WASTE WHILE ENSURING THE DELIVERY OF APPROPRIATE CARE

7.1. Reduce wasteful and inappropriate care for the top ten targeted areas by 50%

INGENIX®

Algorithm

Diabetes Mellitus

Report Case ID: 100311

Version 7.5

INGENIX

Diabetes Mellitus
Table Of Contents
Report Case ID: 100311

Code Sets Utilized

Diagnosis Code Sets	DX0227 Diabetes (HEDIS)
Procedure and Revenue Code Sets	PR0081 Serum Creatinine PR0111 Ambulatory Visit RV0111 Ambulatory Visit PR0194 Emergency Department Visits (HEDIS) RV0194 Emergency Department Visits (HEDIS) PR0195 Nonacute Inpatient Visits (HEDIS) RV0195 Nonacute Inpatient Visits (HEDIS) PR0199 Outpatient Visits, DM (HEDIS) RV0199 Outpatient Visits, DM (HEDIS) PR0330 Acute Inpatient Visits, DM (HEDIS) RV0330 Acute Inpatient Visits,DM (HEDIS) PR0272 ACE/ARB Therapeutic Monitoring Test
Rx Code Sets	RX-3 ACE-Inhibitor-containing medication RX-11 Angiotensin II Receptor Antagonist-containing medication RX-59 Insulin RX-175 Glucometers RX-176 Blood Glucose Test Strips RX-182 Biguanide-containing medication RX0221 Insulin or Oral Hypoglycemics/Antihyperglycemics (HEDIS)

Study Population

Time Frame Requirements

Period	Backward	Forward
Report Period	12m	
Minimum Medical Coverage	12m	
Minimum Pharmacy Coverage	6m	
Medical Claims Extraction	24m	3m
Pharmacy Claims Extraction	12m	3m
Determine Condition (Denom)	24m	
Determine Treatment (Num)	12m	
Physician Attribution	12m	

Rules

Report Rule ID	Rule Stmnt	Headings, Rules & Detail Description
Member Demographics		
		All males or females (no age restrictions)
Member Enrollment		
1102002	A B	Patient must have been continuously enrolled: Medical benefits throughout the 12 months prior to the end of the report period **AND** Pharmacy benefit plan for 6 months prior to the end of the report period *Note: The standard enrollment break logic allows unlimited breaks of no more than 45 days and no breaks greater than 45 days.*
Condition Confirmation		
3128001	A	The patient is listed on the Disease Registry Input File for this condition, if a Disease Registry Input File is available. *Note: Disease Registry is NOT a required input file.*
3109002	A	During the 24 months prior to the end of the report period, did the patient meet any of the following criteria: Patient has 2 or more outpatient or nonacute inpatient encounters (HEDIS) (code set PR0199, RV0199, PR0195, RV0195), where the diagnosis is Diabetes (HEDIS) (code set DX0227) **OR** Patient has 1 or more acute inpatient or emergency department encounters (HEDIS) (code set PR0330, RV0330, PR0194, RV0194), where the diagnosis is Diabetes (HEDIS) (code set DX0227) **OR** Patient has 1 or more prescriptions for Insulin or Oral Hypoglycemics/Antihyperglycemics (HEDIS) (code set RX0221)
Condition Exclusions		
		None

Intervention Rules

Report Rule ID	Rule Type & Task No.	Headings, Rules & Detail Description
Patients taking biguanides (e.g. metformin), thiazolidinediones (e.g. pioglitazone, rosiglitazone), Precose, ACE-inhibitors, or angiotensin II receptor antagonists should have, at a minimum, annual testing of specific serum parameters.		
9000023	**S-M (138)**	**Patient(s) taking a biguanide (e.g. metformin), ACE-inhibitor, or angiotensin II receptor antagonist that had a serum creatinine in last 12 reported months.**
▪ **Result Flag (RF):** ▪ **EBM Flag (EF):** **MCE-Med: 12 Months**		IF (46 = Y OR 49 = Y) AND 50 = Y, set RF to Y, else if NoRx, set RF to NRX, else IF (46 = N AND 49 = N), set RF to NA2, else if MCE met, set RF to N, else set RF to Q IF RF = N, set EF = 1, else set EF = 0 **MCE-Rx: NA**
7123022	A	Did the patient fill a prescription for an ACE-Inhibitor-containing medication (code set RX-3) during the following time period: last 120 days of the report period through 90 days after the end of the report period?
7123025	A	Did the patient fill a prescription for an Angiotensin II Receptor Antagonist-containing medication (code set RX-11) during the following time period: last 120 days of the report period through 90 days after the end of the report period?
7123028	A	Did the patient fill a prescription for a Biguanide-containing medication (code set RX-182) during the following time period: last 120 days of the report period through 90 days after the end of the report period?
7123046	A B	If YES to 22 or YES to 25 AND Was the duration greater than 90 days?
7123049	A B	If YES to 28 AND Was the duration greater than 90 days?
7123050	A	Was there a test for serum creatinine (code set PR0081) or an ACE/ARB therapeutic monitoring test (code set PR0272) during the following time period: 12 months report period through 90 days after the end of the report period?
Patients with DM should have appropriate access to care including, at a minimum, assessment by a physician every 6 months. Patients with suboptimal diabetic control can be identified for additional interventions. Patients with evidence of specific diabetic complications would benefit from endocrinology consultation within 6 months.		
9000027	**CP-I (139)**	**Patient(s) that had an office visit for diabetes care in last 6 reported months.**
▪ **Result Flag (RF):** ▪ **EBM Flag (EF):** **MCE-Med: 180 Days**		IF 59 = Y, set RF to Y, else if MCE met, set RF to N, else set RF to Q IF RF = N, set EF = 1, else set EF = 0 **MCE-Rx: NA**
7123059	A	Did the patient have an ambulatory visit (code set PR0111, RV0111) with a diagnosis of Diabetes (HEDIS) (code set DX0227) during the following time period: last 180 days of the report period through 90 days after the end of the report period?

Report Rule ID	Rule Type & Task No.	Headings, Rules & Detail Description
Patients taking insulin should be self-monitoring their blood glucoses.		
9000030	**R-2 (136)**	**Patient(s) taking insulin with evidence of self-monitoring blood glucose testing.**
▪ **Result Flag (RF):** IF 108 = N, set RF to NA4, else if 66 = Y, set RF to Y, else if MCE met, set RF to N, else set RF to Q ▪ **EBM Flag (EF):** IF RF = N, set EF = 1, else set EF = 0 **MCE-Med: 12 months** **MCE-Rx: 12 months**		
7123066	A	Did the patient fill a prescription for any of the following during the following time period: last 12 months of the report period through 90 days after the end of the report period? ▪ Glucometers (RX-175) ▪ Blood Glucose Test Strips (RX-176)
7123108	A	Did the patient fill a prescription for Insulin (code set RX-59) during the following time period: last 120 days of the report period through 90 days after the end of the report period?
A serum creatinine for estimation of the glomerular filtration rate is recommended annually at minimum for all adults with DM.		
9000043	**R-2 (136)**	**Adult(s) that had a serum creatinine in last 12 reported months.**
▪ **Result Flag (RF):** IF 71 = Y, set RF to NA1, else IF 50 = Y, set RF to Y, else if MCE met, set RF to N, else set RF to Q ▪ **EBM Flag (EF):** IF RF = N, set EF = 1, else set EF = 0 **MCE-Med: 12 months** **MCE-Rx: NA**		
7123071	A	Was the patient's age < 18 years at the end of the report period?

Diagnosis Code Sets

The following tables represent the applicable diagnosis code sets for each condition referenced in the Diabetes Mellitus rules.

DX0227 DIABETES (HEDIS)

ICD-9 Code	Description
250	DIABETES MELLITUS
250.0	DM WITHOUT MENTION OF COMPLICATION
250.00	DIAB W/O COMP TYPE II/UNS NOT STATED UNCNTRL
250.01	DIAB W/O COMP TYPE I [JUV] NOT STATED UNCNTRL
250.02	DIAB W/O MENTION COMP TYPE II/UNS TYPE UNCNTRL
250.03	DIAB W/O MENTION COMP TYPE I [JUV TYPE] UNCNTRL
250.1	DIABETES WITH KETOACIDOSIS
250.10	DIAB W/KETOACIDOS TYPE II/UNS NOT STATED UNCNTRL
250.11	DIAB W/KETOACIDOS TYPE I [JUV] NOT STATE UNCNTRL
250.12	DIABETES W/KETOACIDOSIS TYPE II/UNS TYPE UNCNTRL
250.13	DIABETES W/KETOACIDOSIS TYPE I [JUV] UNCNTRL
250.2	DIABETES WITH HYPEROSMOLARITY
250.20	DIAB W/HYPEROSMOLARITY TYPE II/UNS NOT UNCNTRL
250.21	DIAB W/HYPEROSMOLARITY TYPE I [JUV] NOT UNCNTRL
250.22	DIAB W/HYPEROSMOLARITY TYPE II/UNS TYPE UNCNTRL
250.23	DIAB W/HYPEROSMOLARITY TYPE I [JUV TYPE] UNCNTRL
250.3	DIABETES WITH OTHER COMA
250.30	DIAB W/OTH COMA TYPE II/UNS NOT STATED UNCNTRL
250.31	DIAB W/OTH COMA TYPE I [JUV] NOT STATED UNCNTRL
250.32	DIABETES W/OTH COMA TYPE II/UNS UNCONTROLLED
250.33	DIABETES W/OTH COMA TYPE I [JUV] UNCONTROLLED
250.4	DIABETES WITH RENAL MANIFESTATIONS
250.40	DIAB W/RENAL MANIFESTS TYPE II/UNS NOT UNCNTRL
250.41	DIAB W/RENAL MANIFESTS TYPE I [JUV] NOT UNCNTRL
250.42	DIAB W/RENAL MANIFESTS TYPE II/UNS TYPE UNCNTRL
250.43	DIAB W/RENAL MANIFESTS TYPE I [JUV TYPE] UNCNTRL
250.5	DIABETES WITH OPHTHALMIC MANIFESTATIONS
250.50	DIAB W/OPHTH MANIFESTS TYPE II/UNS NOT UNCNTRL
250.51	DIAB W/OPHTH MANIFESTS TYPE I [JUV] NOT UNCNTRL
250.52	DIAB W/OPHTH MANIFESTS TYPE II/UNS TYPE UNCNTRL
250.53	DIAB W/OPHTH MANIFESTS TYPE I [JUV TYPE] UNCNTRL
250.6	DIABETES WITH NEUROLOGICAL MANIFESTATIONS
250.60	DIAB W/NEURO MANIFESTS TYPE II/UNS NOT UNCNTRL
250.61	DIAB W/NEURO MANIFESTS TYPE I [JUV] NOT UNCNTRL
250.62	DIAB W/NEURO MANIFESTS TYPE II/UNS TYPE UNCNTRL
250.63	DIAB W/NEURO MANIFESTS TYPE I [JUV TYPE] UNCNTRL
250.7	DIABETES WITH PERIPHERAL CIRCULATORY DISORDERS
250.70	DIAB W/PERIPH CIRC D/O TYPE II/UNS NOT UNCNTRL
250.71	DIAB W/PERIPH CIRC D/O TYPE I [JUV] NOT UNCNTRL
250.72	DIAB W/PERIPH CIRC D/O TYPE II/UNS TYPE UNCNTRL

250.73	DIAB W/PERIPH CIRC D/O TYPE I [JUV TYPE] UNCNTRL
250.8	DIABETES WITH OTHER SPECIFIED MANIFESTATIONS
250.80	DIAB W/OTH MANIFESTS TYPE II/UNS NOT UNCNTRL
250.81	DIAB W/OTH MANIFESTS TYPE I [JUV] NOT UNCNTRL
250.82	DIAB W/OTH MANIFESTS TYPE II/UNS TYPE UNCNTRL
250.83	DIAB W/OTH MANIFESTS TYPE I [JUV TYPE] UNCNTRL
250.9	DIABETES WITH UNSPECIFIED COMPLICATION
250.90	DIAB W/UNS COMP TYPE II/UNS NOT STATED UNCNTRL
250.91	DIAB W/UNS COMP TYPE I [JUV] NOT STATED UNCNTRL
250.92	DIAB W/UNSPEC COMP TYPE II/UNSPEC TYPE UNCNTRL
250.93	DIAB W/UNSPEC COMP TYPE I [JUV TYPE] UNCNTRL
357.2	POLYNEUROPATHY IN DIABETES
362.0	DIABETIC RETINOPATHY
362.01	BACKGROUND DIABETIC RETINOPATHY
362.02	PROLIFERATIVE DIABETIC RETINOPATHY
366.41	DIABETIC CATARACT
648.0	MTRN DM COMP PREGNANCY CHILDBIRTH/THE PUERPERIUM
648.00	MTRN DM COMP PG CHLDBRTH/THE PUERPERIUM UNS EOC
648.01	MATERNAL DIABETES MELLITUS WITH DELIVERY
648.02	MATERNAL DM W/DELIVERY W/CURRENT PPC
648.03	MATERNAL DIABETES MELLITUS ANTEPARTUM
648.04	MATERNAL DM PREVIOUS POSTPARTUM CONDITION

Procedure and Revenue Code Sets

The following tables represent the applicable code sets for each procedure that is referenced by the Diabetes Mellitus rules.

PR0081 SERUM CREATININE	
CPT® Code	**Description**
80048	**Basic metabolic panel** - This panel must include the following: Calcium (82310) Carbon dioxide (82374) Chloride (82435) Creatinine (82565) Glucose (82947) Potassium (84132) Sodium (84295) Urea Nitrogen (BUN) (84520)
80050	**General health panel** This panel must include the following: Comprehensive metabolic panel (80053) Hemogram, automated, and manual differential WBC count (CBC) (85022) OR Hemogram and platelet count, automated, and automated complete differential WBC count (CBC) (85025) Thyroid stimulating hormone (TSH) (84443)
80053	**Comprehensive metabolic panel** - This panel must include the following: Albumin (82040) Bilirubin, total (82247) Calcium (82310) Carbon dioxide (bicarbonate) (82374) Chloride (82435) Creatinine (82565) Glucose (82947) Phosphatase, alkaline (84075) Potassium (84132) Protein, total (84155) Sodium (84295) Transferase, alanine amino (ALT) (SGPT) (84460) Transferase, aspartate amino (AST) (SGOT) (84450) Urea Nitrogen (BUN) (84520)
80069	**Renal function panel** - This panel must include the following: Albumin (82040) Calcium (82310) Carbon dioxide (bicarbonate) (82374) Chloride (82435) Creatinine (82565) Glucose (82947) Phosphorus inorganic (phosphate) (84100) Potassium (84132) Sodium (84295) Urea nitrogen (BUN) (84520)
82565	Creatinine; blood

PR0111 AMBULATORY VISIT CODES		
CPT Code	**Specific Encounter Type**	**General Encounter Category**
99201-99215	Office Visit	Outpatient Professional
99241-99245	Office Consult	Outpatient Professional
99271-99275	Confirmatory Consultation	Confirmatory Consultation
99341-99350	Home Visit	Outpatient Professional
99381-99397	Preventive Medicine Visit	Outpatient Professional
99401-99429	Counseling/Risk Factor Visit	Counseling/Risk Factor Visit
RV0111 AMBULATORY VISIT CODES		
Revenue Code	**Specific Encounter Type**	**General Encounter Category**
0983	Clinic Visit (Professional Component)	Outpatient Professional

PR0194 EMERGENCY DEPARTMENT VISITS (HEDIS)	
CPT Code	**Description**
99281-99285	Emergency Department Visit
RV0194 EMERGENCY DEPARTMENT VISITS (HEDIS)	
Revenue Code	**Description**
0450	Emergency Room-General
0451	Emergency Room-EMTALA Emergency Medical Screening Services
0452	Emergency Room-ER Beyond EMTALA Screening
0456	Emergency Room-Urgent Care
0459	Emergency Room-Other Emergency Room
0981	Professional Fee/Emergency Room

PR0195 NONACUTE INPATIENT VISITS (HEDIS)	
CPT Code	**Specific Encounter Type**
99301-99313	Nursing Facility Services
99315-99316	Nursing Facility Discharge Day Management
99318	Annual nursing facility assessment
99321-99328	Domiciliary, Rest Home or Custodial Care Services
99331-99337	Domiciliary, Rest Home or Custodial Care Services

RV0195 NONACUTE INPATIENT VISITS (HEDIS)	
Revenue Code	**Specific Encounter Type**
0118	Room & Board-Private-Rehabilitation
0128	Room & Board-Semiprivate Two-Bed-Rehabilitation
0138	Semiprivate-Three and Four Beds-Rehabilitation
0148	Private (Deluxe)-Rehabilitation
0158	Room & Board-Ward-Rehabilitation
0190-0199	Subacute Care
0524-0525	Free Standing Clinic
0550-0559	Skilled Nursing
0660-0669	Respite Care

PR0199 OUTPATIENT VISITS, DM (HEDIS)		
CPT Code	**Specific Encounter Type**	**General Encounter Category**
92002-92014	General Ophthalmological Services	General Ophthalmological Services
99201-99205	Office Visit, New Patient	Outpatient Professional
99211-99215	Office Visit, Established Patient	Outpatient Professional
99217-99220	Observation Care	Observation Care
99241-99245	Office Consult	Outpatient Professional
99341-99350	Home Visit	Outpatient Professional
99384-99387	Preventive Medicine Visit, New Patient	Preventive Medicine Services
99394-99397	Preventive Medicine Visit, Established Patient	Preventive Medicine Services
99401-99404	Counseling/Risk Factor Reduction Intervention	Preventive Medicine Services
99411-99412	Counseling/Risk Factor Reduction Intervention	Preventive Medicine Services
99420	Counseling/Risk Factor Reduction Intervention	Preventive Medicine Services
99429	Counseling/Risk Factor Reduction Intervention	Preventive Medicine Services
99455-99456	Work Related Or Medical Disability Evaluation Services	Work Related Or Medical Disability Evaluation Services
99499	Other Evaluation and Management Services	Special E&M Services

RV0199 OUTPATIENT VISITS, DM (HEDIS)		
Revenue Code	**Specific Encounter Type**	**General Encounter Category**
0510-0519	Clinic Visit (Facility Component)	Ancillary Services
0520-0523	Free Standing Clinic	Ancillary Services
0526-0529	Free Standing Clinic	Ancillary Services
0570-0599	Home Health	Ancillary Services
0770-0779	Preventive Care Service	Ancillary Services
0820-0859	Outpatient or home dialysis	Ancillary Services
0880-0889	Miscellaneous Dialysis	Ancillary Services
0982-0983	Professional Fees	Ancillary Services

PR0272 ACE/ARB THERAPEUTIC MONITORING TEST	
CPT Code	**Description**
4188F	Appropriate angiotensin converting enzyme (ACE)/angiotensin receptor blockers (ARB) therapeutic monitoring test ordered or performed (AM)2

PR0330 ACUTE INPATIENT VISITS, DM (HEDIS)	
CPT Code	**Description**
99221-99223	Inpatient hospital care
99231-99233	Subsequent hospital care
99238 - 99239	Discharge day management
99251-99255	Initial inpatient consultation
99261-99263	Follow-up inpatient consultation
99291	Critical care
RV0330 ACUTE INPATIENT VISITS, DM (HEDIS)	
Revenue Code	**Description**
0100-0101	Room and board – all inclusive and private
0110-0114	Room and board – private
0119	Room and board – private other
0120-0124	Room and board – semi-private
0129	Room and board – semi-private other
0130-0134	Semiprivate-three and four beds
0139	Semiprivate-three and four beds - other
0140-0144	Private
0149	Private - other
0150-0154	Room and board-ward
0159	Room and board-ward - other
0160-0169	Other room and board
0200-0229	Intensive care/coronary care
0720-0729	Labor room/delivery
0800-0804	Inpatient renal dialysis
0809	Inpatient renal dialysis-Other inpatient dialysis
0987	Professional Fees - Hospital Visit

Pharmacy Code Sets

The following tables provide the generic ingredients for drugs and other pharmaceuticals referenced in the Diabetes Mellitus rules. HCPCS codes are not used in possession ratio or equivalent dose calculations. Only pharmacy records which use National Drug Codes (NDC) to identify the specific medication are used in these calculations.

RX-3: ACE-INHIBITOR-CONTAINING MEDICATION

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Benazepril HCl			
CPT	0008F	ACE INHIBITOR THERAPY PRESCRIBED			
NDC		Captopril			
NDC		Enalapril Maleate			
NDC		Enalaprilat Dihydrate			
NDC		Fosinopril Sodium			
NDC		Lisinopril			
NDC		Moexipril HCl			
NDC		Quinapril HCl			
NDC		Ramipril			
NDC		Trandolapril			
NDC		Perindopril Erbumine			
NDC		Benazepril HCl / Hydrochlorothiazide			
NDC		Enalapril Maleate / Hydrochlorothiazide			
NDC		Captopril / Hydrochlorothiazide			
NDC		Moexipril HCl / Hydrochlorothiazide			
NDC		Lisinopril / Hydrochlorothiazide			
NDC		Quinapril HCl / Hydrochlorothiazide			
NDC		Fosinopril Sodium / Hydrochlorothiazide			
NDC		Amlodipine Besylate / Benazepril			
NDC		Trandolapril / Verapamil HCl			
NDC		Enalapril Maleate/ Diltiazem Maleate			
NDC		Enalapril Maleate / Felodipine			

RX-11: ANGIOTENSIN II RECEPTOR ANTAGONIST-CONTAINING MEDICATION

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Losartan Potassium			
NDC		Valsartan			
NDC		Irbesartan			
NDC		Eprosartan Mesylate			
NDC		Telmisartan			
NDC		Candesartan Cilexetil			
NDC		Olmesartan Medoxomil			
NDC		Losartan Potassium / Hydrochlorothiazide			
NDC		Valsartan / Hydrochlorothiazide			
NDC		Irbesartan / Hydrochlorothiazide			
NDC		Candesartan Cilexetil / Hydrochlorothiazide			
NDC		Telmisartan / Hydrochlorothiazide			
NDC		Eprosartan Mesylate / Hydrochlorothiazide			
NDC		Olmesartan Medoxomil / Hydrochlorothiazide			
NDC		Valsartan / Amlodipine			

RX-59: INSULIN

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Insulin regular			
CPT	J1815	INJECTION INSULIN PER 5 UNITS			
CPT	J1817	INSULIN ADMINISTRATION THROUGH DME PER 50 UNITS			
CPT	J1820	INJ INSULIN TO 100 UNITS			
CPT	S5550	INSULIN RAPID ONSET; 5 UNITS			
NDC		Isophane insulin suspension, NPH			
CPT	S5552	INSULIN INTERMEDIATE ACTING; 5 UNITS			
NDC		Isophane insulin suspension, NPH 70% & R 30%			
NDC		Isophane insulin suspension, NPH 50% & R 50%			
NDC		Insulin zinc suspension semilente, prompt			
NDC		Insulin zinc suspension lente			
NDC		Insulin zinc suspension ultralente, extended			
NDC		Protamine zinc insulin suspension (PZI)			
NDC		Insulin lispro [rDNA origin]			
CPT	K0548	INJECTION INSULIN LISPRO UP TO 50 UNITS			
CPT	S5551	INSULIN MOST RAPID ONSET; 5 UNITS			
NDC		Insulin concentrated regular			
NDC		Insulin [human] regular, buffered			
NDC		Insulin lispro protamine suspension & insulin lispro [rDNA origin]			
NDC		Insulin glargine [rDNA origin]			
CPT	S5553	INSULIN LONG ACTING; 5 UNITS			
NDC		Insulin aspart [rDNA origin]			
NDC		Insulin aspart & insulin aspart protamine [rDNA origin]			
NDC		Insulin glulisine [rDNA origin]			
NDC		Insulin detemir			
NDC		Insulin human [rDNA origin], inhalation powder			

RX-175: GLUCOMETERS

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Glucometers			
HCPCS	A9275	Home glucose disposable monitor, includes test strips			
HCPCS	E0607	HOME BLOOD GLUCOSE MONITOR			
HCPCS	E2100	BLD GLU MONITOR W/INTEGRATED VOICE SYNTHESIZER			
HCPCS	E2101	BLD GLU MONITOR W/INTEGRATED LANCING/BLD SAMPLE			

RX-176: BLOOD GLUCOSE TEST STRIPS					
Code Type	**Proc Code**	**Code Description**	**Route of Admin**	**Dosage Form**	**Dosage Strength**
NDC		Blood Glucose Test Strips			
HCPCS	A4772	BLOOD GLUCOSE TEST STRIPS FOR DIALYSIS PER 50			

RX-182: BIGUANIDE-CONTAINING MEDICATION					
Code Type	**Proc Code**	**Code Description**	**Route of Admin**	**Dosage Form**	**Dosage Strength**
NDC		Metformin HCl			
NDC		Glyburide / Metformin			
NDC		Rosiglitazone Maleate / Metformin HCl			
NDC		Glipizide / Metformin HCl			
NDC		Pioglitazone HCl / Metformin			
NDC		Sitagliptin / Metformin HCl			

The NDC codes that are included in the pharmacy code set RX0221 – Insulin or oral hypoglycemics/antihyperglycemics (HEDIS) can be found in the accompanying document, NDC Code Tables.

Glossary

<table>
<tr><th>Term</th><th>Definition</th></tr>
<tr><td>℞</td><td>The presence of ℞ in the Report Rule ID column indicates that the rule candidate is exclusively or primarily dependent on pharmacy claims information. Members who do not have a managed pharmacy benefit, as determined from the Member Term input data file, will be assigned a default value of ‘N’ for these rule candidates, thus eliminating unnecessary processing time.</td></tr>
<tr><td>Result Flag ‘Y’</td><td>A Result Flag of ‘Y’ is assigned to indicate that the result of the rule is affirmative; the treatment was provided, the diagnostic test was performed, the lab value was normal, etc. If a rule has an affirmative result, the result flag of Y will be assigned regardless of the patient’s length of eligibility.</td></tr>
<tr><td>Result Flag ‘N’</td><td>A Result Flag of ‘N’ is assigned to indicate that the result of the rule is negative AND the patient met the minimum eligibility requirements for that particular rule. For example, if the rule is looking for a drug within the last 120 days, the patient must be enrolled in a drug benefit for at least the last 120 days.</td></tr>
<tr><td>Result Flag ‘Q’</td><td>A Result Flag of ‘Q’ is assigned to indicate that there was no claim record indicating that the patient received a particular test or treatment, but there may be data incompleteness due to lack of continuous enrollment. If a patient is not continuously enrolled in medical or pharmacy benefits throughout the window of time during which the service was being evaluated, there is no way to know whether the test was performed or not. The absence of a claim record for the test might be due to data incompleteness prior to the onset of medical benefits, or it might reflect the fact that the patient did not actually receive the test.</td></tr>
<tr><td>Result Flag ‘NA’</td><td>A Result Flag of ‘NA’ is assigned to indicate that the member has clinical characteristics or contraindications that render a particular rule “not applicable” to that particular member. There are seven (7) breakdowns of the NA result flag, which provide a method for further identification and clarification of this flag:
<table>
<tr><th>FLAG</th><th>DESCRIPTION</th></tr>
<tr><td>NA1</td><td>Patient did not meet the age or gender criteria.</td></tr>
<tr><td>NA2</td><td>Patient was not currently taking the medication in question or had not taken it for the required duration.</td></tr>
<tr><td>NA3</td><td>Patient was taking the medication, but a possession ratio could not be computed [less than two prescriptions during the rule time window].</td></tr>
<tr><td>NA4</td><td>Patient did not meet the rule specific criteria [e.g., co-morbidity, complexity (diagnosis and medication), intervention not warranted].</td></tr>
<tr><td>NA5</td><td>No lab result record or insufficient information.</td></tr>
<tr><td>NA6</td><td>Patient admitted to long term care facility or hospital which might cause data incompleteness.</td></tr>
<tr><td>NA7</td><td>Patient who did not receive treatment or medication had a contraindication or other justification.</td></tr>
</table></td></tr>
<tr><td>Result Flag ‘NRX’</td><td>A Result Flag of ‘NRX’ is assigned under the following circumstances to the rule types noted below: 1) the member did not have a pharmacy benefit at the end of the report period (applies to chronic and some preventive cases (case ID = 1xxxxx or 3xxxxx)) or 2) the member did not have a pharmacy benefit throughout the duration of episodic condition (case ID = 2xxxxx).
▪ Research Based rules (R-1, R-2)
▪ Medication Adherence rules (A)
▪ Patient Safety rules (S-M, S-DI)
These rule types are exclusively or primarily dependent on pharmacy claims. For Care Pattern rules (CP-I, CP-R, CP-E), a Q flag will be assigned if the patient does not meet the minimum pharmacy eligibility requirements for the particular rule. In addition to the above, some national standard rules may also have NRX flags assigned if the member did not have pharmacy benefit at the end of the report period.</td></tr>
<tr><td>MCE</td><td>In order to assign a Result Flag of 'Q', each rule has a specific Minimum Continuous Enrollment (MCE) period for medical and pharmacy benefits which reflects the time frame of the recommended services (e.g., if the rule is looking for a test within 12 months the medical MCE is 12 months). When a test or treatment is absent, the MCE is used to determine whether to assign a result flag of ‘N’ or ‘Q’. A Result Flag of ‘N’ is assigned when the patient meets the MCE requirements. A Result Flag of ‘Q’ is assigned when the patient does not meet the MCE requirements.</td></tr>
</table>

INGENIX®

Quality Processes

10/27/08

INGENIX®

Table of Contents

INGENIX®

Section 1 - Overview

1.1 Purpose of Document

This document describes the quality processes from clinical measure creation to final product delivery. These processes ensure that the information provided to our clients has maximum quality and integrity.

1.2 Overview

Evidence-based treatment guidelines have been developed with the belief that adherence to them lowers costs, increases quality of care, or both. Health service organizations, payers, and employers want to provide the best care at the best cost. By integrating clinically relevant research evidence with actual care patterns, as evidenced through claims and other administrative data, gaps in care can be identified and interventions can be targeted to improve outcomes (cost and quality).

Measures are created through a well-defined process involving careful review at every step. Quality checks are performed in five different phases of development:

1. Clinical Measure Creation
2. Conversion of Clinical Measures to Machine Code
3. Clinical Measures Processing Engine (i.e., component-ware)
4. End to End Testing (Customer Acceptance Testing)
5. Validation of Results

1.3 Testing Through Multiple Methods

Quality assurance of each measure is accomplished through the testing using multiple methods. Types of testing, data samples and volume vary to ensure the integrity of the measure. Rigorous development, analysis and testing processes are deployed for creating of the measure specifications. Software testing ensures the software is working as designed. Reliability and validity testing of measures is based on differing data samples and volume of members. National benchmarks are created on a large volume set of data representing members throughout the United States. All quality checks for all measure results must have consistent results and meet expected outcomes based on industry knowledge and experience.

Section 2 - Quality Processes

2.1 Creation of Clinical Measures

2.1.1 Literature Review

The process of measure creation begins with the clinician, who reviews published literature on evidence-based medicine. Various resources are examined, including but not limited to:

- MEDLINE
- Professional and specialty organization (e.g. ADA, ACC/AHA) guidelines
- Agency for Healthcare Research and Quality (AHRQ) including national clearinghouse guidelines
- National standards (e.g. HEDIS, AMA PCPI, AQA, NQF)
- Institute for Clinical Systems Improvement (ICSI)
- Food and Drug Administration (FDA) Advisories
- Published clinical trials and other relevant articles

- Pharmaceutical manufacturer's recommendations

Based upon the supporting literature and the ability to adequately define and measure care using electronic claims data, proposed new measures are developed. Note: this same process is employed when deciding whether to update or retire an existing measure.

2.1.2 Expert Panel Review

The proposed measures and current treatment guidelines are then reviewed by the Clinical Consultant Panel. This expert panel plays a critical role in the creation and maintenance of measures. The panel is currently comprised of 21 clinicians, including 18 physicians and 3 Pharmacologists. Each physician is board certified in their area of specialty and has more than 15 years of clinical practice.

The specialties / sub-specialties represented on the panel are:

Specialty	
Cardiology (2)	Oncology
Endocrinology	Ophthalmology
Family Practice	Orthopedics
Gastrointestinal	Otolaryngology
Geriatrics	Pediatrics
Hematology	Psychiatry (2)
Infectious Disease	Pulmonary
Internal Medicine	Rad Oncology
Nephrology	Rheumatology
Neurology (4)	Surgery
OB/GYN	

The physicians on the panel are practicing physicians in settings such as a university hospital, VA hospital, medical center, clinic, independent or group practice. The Pharmacologists have more than 10 years of clinical practice. All clinicians, with the exception of the Medical Director, have no affiliation with UnitedHealth Group outside of their responsibilities on the Clinical Consultant Panel. An annual training session is held for all panel members to provide updates on future product enhancements.

2.1.3 Summary of Evidence Basis

When the expert panel has reached consensus on the proposed measures, a synopsis of the evidence basis for each measure is developed. This synopsis includes citations for published research and guidelines that support the measure, as well as strength of evidence ratings when these rankings are available.

2.1.4 Clinical Algorithms

In conjunction with the synopsis a clinical algorithm is developed which indicates how to define and evaluate the clinical measures. This document includes condition confirmation criteria, exclusion rules, intervention rules, and compliance criteria, as well as high-level details of diagnostic, procedural, revenue, pharmaceutical, and laboratory code sets. These code sets are defined and maintained in a secure product database.

2.1.5 Maintenance Review Cycle

Existing measures are reviewed every 12-24 months as part of an ongoing product maintenance cycle. Any member of the expert panel may suggest changes to a measure at any point, even outside of the regular review cycle, if new evidence is published which relates to the measure.

2.2 Conversion of Clinical Measures into Software Code

The clinical algorithms are converted into software code. A team of business analysts, nurses, and health services researchers translates the words from the clinical algorithm into machine readable language. The team members independently peer review and sign off on each measure to ensure that the software code accurately reflects the original measure specifications.

2.3 Testing of Engine Software Code

The software code from is processed to produce compliance results. Per the product development life cycle there are multiple types of testing activities associated with this component-ware engine. Security requirements, performance requirements, legal requirements (e.g. HIPAA), content requirements, and usability are all tested and verified.

2.3.1 Unit and Integration Testing

During unit and integration testing each engine component is tested discretely by the developer or software engineer who programmed it. In unit testing the developer tests functional features, environmental requirements, system behavior and performance aspects. When the software moves into integration testing, the developer performs positive and negative testing of system interfaces to verify that the functions which were tested at the unit level perform correctly in a full system build and deployment.

2.3.2 Functional Testing

Functional testing is conducted at the end of each software iteration to test the alignment of the product to the functional requirements. The QA team performs positive and negative testing of product requirements and architecture. At the end of functional testing, the decision is made either to move on to the next iteration or to move the software into system testing.

2.3.3 System Testing

There are three types of system testing initiatives which are conducted using sample data to simulate business processes. The table below describes the purpose of each type of system test.

Test Type	Description
Volume testing	Determine whether the engine can handle the required volume of data
Performance testing	Determine whether the engine meets its performance requirements
Platform testing	Ensure that the component-ware works appropriately for all supported operating systems

2.4 Reliability Testing

Customer Acceptance Testing (CAT) is another important quality process. CAT ensures that the clinical measures are functioning as intended and that they generate accurate results for typical billing patterns. Using actual claims data a team of business analysts, nurses, and health services researchers conducts a detailed analysis of the output. For each clinical condition in the product (e.g., Diabetes Mellitus, Coronary Artery Disease, etc.) there is a set of CAT data with at least 4000 members who satisfy the condition confirmation criteria. This data is extracted from a large (50+ million member) multi-payer benchmark database and contains inpatient, outpatient, pharmacy, and laboratory data. The testing team rigorously checks the creation of denominators (target population), numerators, and exclusions from both.

Regression testing is the part of CAT that verifies the reliability of the product across software releases. For a new release the testing team confirms that every unchanged measure produces the same results as in previous releases, accounting for systematic changes to the software (e.g., code updates, logic changes, etc). Regression testing is conducted at multiple points throughout the software development cycle.

2.5 Validity Testing

Face Validity Testing (FVT) is the final testing step in the software release cycle. One million members are randomly selected from the large multi-payer benchmark database and their claims data is processed through the software. The Medical Director reviews the results to verify that:

- Prevalence rates for a condition are comparable to nationally published rates
- Compliance rates for a measure are comparable to the rates reported in the published literature or by other national sources (e.g. HEDIS). If no comparable sources are available, the rates are judged to be clinically reasonable by practicing physicians and health services researchers
- There are no significant, unexplained variations when looking at results from different health plans and different geographic areas

2.6 Creation of National Benchmarks

National benchmarks are on a population no less than 12 million members. Prevalence is calculated doe each condition. Compliance rates are calculated for each measure.
The Medical Director reviews the results to verify that:

- Prevalence rates for a condition are comparable to nationally published rates
- Compliance rates for a measure are comparable to the rates reported in the published literature or by other national sources (e.g. HEDIS). If no comparable sources are available, the rates are judged to be clinically reasonable by practicing physicians and health services researchers
- There are no significant, unexplained variations when looking at results from different health plans and different geographic areas

Section 3 - Summary

Ensuring quality in the product requires expertise from a variety of disciplines across each step in the development process. These efforts, which are designed to minimize the risk of producing inaccurate results, are particularly important for an application which assesses clinical care and identifies gaps in care. Errors cannot be completely eliminated due to the inherent limitations of administrative and claims data (e.g., incomplete data due to coverage and benefit limitations, coordination across multiple insurers, or complimentary care). None-the-less, administrative and claims data offer a cost effective means of identifying gaps in care, so that limited resources can be directed to the areas most likely to generate a return on investment, either through improved outcomes, reduced costs, or both.

INGENIX®

Input Guide

Release 7.0, Technical Guide for Windows, February 2008

Ingenix
950 Winter Street, Suite 3800
Waltham, MA 02451
Customer Support:
Tel: 866.818.7424
Fax: 781.895.9951
SymmetrySuite.Support@ingenix.com

What Input Files to Prepare

The following list specifies what input files you prepare for processing:

- The claims data file (required)
- The member data file (required)
- The member term data file (required)

Field Type Definitions and Input File Requirements

This chapter lists the field requirements for your input files. One of the attributes listed among the requirements is defined as "Type". There are four field types used to describe a field's value, and they are defined below.

Field Type	Definition
AlphaNum	A value made of letters and/or numbers. If a value of this type is made of numbers only, it will not be a value that can be operated on mathematically. For example, it would be inappropriate to subtract one procedure code from another procedure code even though both values may contain only numbers.
Num	A value made of numbers only, and which can logically be operated on mathematically. Age is an example of this type. One particular field, while not used in mathematical calculations, is defined in the EBM Connect software as such that it accepts only numeric values. (To enter a non-numeric value would cause EBM Connect processing to stop.) Therefore, this field is defined as Num. It is the Case ID field in the optional disease registry input file.
Date	A value which can be interpreted as a date value. Values should always use four-digit years but the format may vary otherwise.
DecNum	A value made of numbers and a decimal point. These values can also logically be operated on mathematically.

Claims Input File

The claims file contains detailed information on services that were billed or performed or otherwise rendered. The claims file includes:

- Medical claims, including medical services, facility services and clinic services
- Pharmacy claims, including billed prescriptions and drugs
- Lab claims, including lab test and results information

Field Name	Type	Length	Required or Optional
Family ID	AlphaNum	1-30	Always required for all claims
Patient ID	AlphaNum	0-2	Optional
Amount Paid	DecNum	1-11	Required for all claims
Amount Allowed	DecNum	0-11	Required for all claims
Procedure Code	AlphaNum	5	Required if there is no revenue code, NDC, or LOINC® code
Procedure Code Modifier	AlphaNum	2	Required for medical claims
Revenue Code	AlphaNum	0 or 4	Optional (applies to medical claims when used)
First Diagnosis Code	AlphaNum	5 or 6	Required for medical claims
Second Diagnosis Code	AlphaNum	0, 5 or 6	Optional (applies to medical claims when used)
Third Diagnosis Code	AlphaNum	0, 5 or 6	Optional (applies to medical claims when used)
Fourth Diagnosis Code	AlphaNum	0, 5 or 6	Optional (applies to medical claims when used)
First Date of Service	Date	8 or 10	Always required for all claims
Last Date of Service	Date	8 or 10	Required for all claims

Paid Date	Date	0, 8 or 10	Optional
Type of Service	AlphaNum	0-10	Optional
Provider ID	AlphaNum	1-20	Required for medical claims
Ordering Provider ID	AlphaNum	0-20	Optional
Provider Type	AlphaNum	1-10	Required for medical claims
Provider Specialty Type	AlphaNum	1-10	Required for medical claims
Provider Key	AlphaNum	1-20	Required for medical claims
NDC	AlphaNum	0 or 11	Required for Rx claims
Day Supply	Num	0-4	Required for Rx claims
Quantity Count	DecNum	0-10	Required for Rx claims
LOINC®	AlphaNum	0 or 7	Required for lab claims
Lab Test Result	AlphaNum	0-18	Required for lab claims
Place of Service	AlphaNum	1-10	Required for medical claims
Unique Record ID	AlphaNum	1-28	Required for all claims
Claim Number	AlphaNum	1-28	Required for all claims
Bill Type Frequency Indicator	Num	0 or 1	Optional
Patient Status	AlphaNum	1-2	Required for facility claims (involving admission or confinement).
Facility Type	AlphaNum	0-2	Optional
Bed Type	AlphaNum	0-1	Optional
First ICD-9 Procedure Code	AlphaNum	0, 4 or 5	Optional, but will impact results (applies to medical claims when used)
Second ICD-9 Procedure Code	AlphaNum	0, 4 or 5	Optional (see above)
Third ICD-9 Procedure Code	AlphaNum	0, 4 or 5	Optional (see above)
Fourth ICD-9 Procedure Code	AlphaNum	0, 4 or 5	Optional (see above)

Field Descriptions

Instructions for each input field are as follows:

Family ID

This field identifies all members of a family and can be any alphanumeric string.

Note: Remember that each Family ID (and Patient ID) listed in your claims input file must have a corresponding record in your member input data file and your member term data file.

Patient ID

This field identifies individual members within a family. If present, this field must be sorted within Family ID, so that all records for an individual are contiguous. If the Family ID uniquely identifies an individual, this field need not be specified (that is, its length in the dictionary will be zero).

Amount Paid

The amount paid for this claim line.

Amount Allowed

The allowed amount for this claim line. This amount typically represents the total amount reimbursed including deductibles, copays, coinsurance, insurer paid, etc.

Procedure Code

The procedure code must be one of:

- A procedure code specified in the Physician's Current Procedure Terminology, 4th Edition (CPT®-4 codes) defined by the American Medical Association, for the years 1997 and later.
- A procedure code specified by the HCFA Common Procedure Coding System, Level II code (HCPCS) defined by the Centers for Medicare and Medicaid Services (CMS) for the years 1999 and later.
- A National Uniform Billing Committee (NUBC) revenue code.

Note: When the NUBC code is entered in the Procedure Code field, it should be padded to the right with blanks because the Procedure Code field always occupies five characters.

- If your organization defines its own procedure codes and/or revenue codes, they must be mapped to standard procedure and revenue codes.

Procedure Code Modifier

Use this field to specify any procedure code modifier that accompanies the procedure code.

Revenue Code

The revenue code, if one was entered for the claim. Supported values in this field are NUBC revenue codes. If your organization defines its own revenue codes, they must be mapped to standard revenue codes.

The revenue code is an optional field, allowing you to define your input records so that you can place an NUBC revenue code and a CPT/HCPCS procedure code on a single record line.

For claim records that do not have a revenue code, leave the revenue code field blank.

First Diagnosis Code Through Fourth Diagnosis Code

Up to four diagnoses may be entered for each claim, but only the first is required.

If your organization defines its own diagnosis codes, they must be mapped to standard ICD-9 diagnosis codes.

First Date of Service and Last Date of Service

The first date and last date represented by the claim line. If you choose to use a date format with separators (such as YYYY/MM/DD or YYYY-MM-DD), the separators are ignored on input, so you can use any character as a separator. Valid formats include: YYYYMMDD, MMDDYYYY, DDMMYYYY, YYYY/MM/DD, MM/DD/ YYYY, and DD/MM/YYYY, where the separator can be any character.

Paid Date

This field is optional. This is the date the claim was paid. The format of the paid date must be the same as that used in the First and Last Date of Service.

Type of Service

This is an optional code which represents the type of service (TOS) performed for this claim. If no specific value is available for this field, it should be filled with blanks. If this field is not used (i.e., its length is set to zero in the configuration), non-pharmaceutical claims with no procedure code will be treated as ancillary records.

Provider ID

Provider identification number from the claim. Used to identify who performed the service.

Ordering Provider ID

This is an optional field. This is the identification number of the provider who ordered the service.

Provider Type

This code represents the type of provider who performed the service. Examples of provider types would be chiropractor, nurse practitioner, medical doctor, counselor, pharmacy, hospital or treatment facility.

Provider Specialty Type

This code represents the specialty of the provider who performed the service.

Provider Key

Unique number or code for a physician who has multiple provider IDs or specialties. A single health care provider may have multiple provider IDs in your input claims data, but this person or entity should have only one provider key.

NDC

If this is a pharmaceutical claim, this field should contain the drug's NDC code. For non-pharmaceutical claim records, the NDC field should be filled with blanks.

Day Supply

For pharmacy records, the number of days a filled prescription is expected to last. If you have no pharmacy records, the Days Supply is an optional field.

Quantity Count

Quantity of drug dispensed in metric units:

Each - solid oral dosage forms (tablet, capsule), powder filled (dry) vials, packets, patches, units of use packages, suppositories, bars.

Milliliter - (cc) liquid oral dosage forms, liquid filled vials, ampules, reconstituted oral products.

Grams - ointments, bulk powders (not IV).
If you have no pharmacy records, the Quantity Count is an optional field.

LOINC®

Logical Observation Identifiers Names and Codes (LOINC®). The LOINC Code is a universal identifier for a lab test for a particular analyte. The LOINC User's Guide and database can be found at www.regenstrief.org.

Enter a LOINC code if the record is a lab record. For non-lab records, leave the LOINC field blank.

If you have no lab records in your claims input, the LOINC code is optional.

Notes:

(1) When using lab results data that has not been mapped to a LOINC code, map the comparable vendor-specific test number provided by the laboratory vendor(s) to one of these default codes.

(2) This is a retired code which may be present on historical data, or which some laboratories may be continuing to use. Input record data with this code is included in the definition of this test.

Lab Test Result

If the record is a lab record, use this field to enter the result value of lab test. For non-lab records, this field should be blank.

If you have no lab records in your claims input, the Lab Test Result is optional.

Place of Service

Place of service (POS). You must map your internal POS codes to Centers for Medicare and Medicaid Services (CMS) standard POS codes.

Unique Record ID

This required field contains a unique identifier representing the service line from the claim. For medical services, this ID typically represents the service row from the CMS 1500 or CMS 1450/UB92 claim form.

Claim Number

A unique identifier used to link service lines for a specific claim submitted for a member. If a claim has multiple service lines, each service will have a unique record ID and the same claim number to represent the claim.

Bill Type Frequency Indicator

This optional field is used to indicate the disposition of confinements.

Patient Status

This field is required for facility claims. The contents will be the patient status indicator field from the NUBC UB-92 form. This field can denote whether the member died during a confinement.

Facility Type

This field is optional. Space for it is provided to allow for additional post grouping analysis. The contents will typically be the UB-92 facility type data value. This would allow records to be easily selected for diagnosis related grouping (DRG) based on the facility type.

Bed Type

If a value is present, this field acts as an additional discriminator in determining whether a Facility record extends an existing confinement or starts a new confinement.

First ICD-9 Procedure Code Through Fourth ICD-9 Procedure Code

If your claims have ICD-9 procedure codes, include them in your claims input file.

If a decimal point will appear in this field in your claim records, the length should be given as 5. If the decimal separator is not used, the length is 4. If these fields are unused, the length is zero.

Member Input File

The member data file contains the most current information about the member.

Field Descriptions

Field	Type	Length	Required or Optional
Family ID	AlphaNum	1-30	Required
Patient ID	AlphaNum	0-2	Optional
Patient Gender	AlphaNum	1	Required
Date of Birth	Date	8 or 10	Required
Member Beginning Eligibility Date	Date	0, 8 or 10	Optional
Member Ending Eligibility Date	Date	0, 8 or 10	Optional

Instructions for each input field are as follows:

Family ID

This field identifies all members of a family and can be any alphanumeric string. The records in the member file must be sorted first on the Family ID (together with Patient ID, if available) so that all records for an individual are contiguous.

Patient ID

This field identifies individual members within a family. If present, this field must be sorted within Family ID, so that all records for an individual are contiguous. If the Family ID uniquely identifies an individual, this field need not be specified (that is, its length in the dictionary will be zero).

Patient Gender and Date of Birth

The member's gender (F or M) and date of birth. If you choose to use a date format with separators (such as YYYY/MM/DD or YYYY-MM-DD), the separators are ignored on input, so you can use any character as a separator. Valid date formats include: YYYYMMDD, MMDDYYYY, DDMMYYYY, YYYY/MM/DD, MM/DD/YYYY, and DD/MM/YYYY, where the separator can be any character.

Member Beginning Eligibility Date and Ending Eligibility Date

The first date on which the member became covered under the plan and the last date of the member's coverage. If you choose to use a date format with separators (such as YYYY/MM/DD or YYYY-MM-DD), the separators are ignored on input, so you can use any character as a separator. Valid formats include: YYYYMMDD, MMDDYYYY, DDMMYYYY, YYYY/MM/DD, MM/DD/YYYY, and DD/MM/YYYY, where the separator can be any character.

Member Term Input File

The member term data file contains member coverage and term activity information. Plan coverage begin and end dates are required in order to correctly calculate the other fields in the member term file. There may be more than one record per individual member.

Field Descriptions

Field	Type	Length	Required or Optional
Family ID	AlphaNum	1-30	Required
Patient ID	AlphaNum	0-2	Optional
Member Beginning Eligibility Date	Date	8 or 10	Required
Member Ending Eligibility Date	Date	8 or 10	Required
Primary Care Provider	AlphaNum	20	Required
Provider Specialty Type	AlphaNum	1-10	Required
Medical Flag	AlphaNum	1	Required
Pharmacy Flag	AlphaNum	1	Required

Instructions for each input field are as follows:

Family ID

This field identifies all members of a family and can be any alphanumeric string. The records in the member term file must be sorted first on the Family ID (together with Patient ID, if available) so that all records for an individual are contiguous.

Patient ID

This field identifies individual members within a family.

Member Beginning Eligibility Date and Member Ending Eligibility Date

The first date on which the member became covered under the plan and the last date of the member's coverage. If you choose to use a date format with separators (such as YYYY/MM/DD or YYYY-MM-DD), the separators are ignored on input, so you can use any character as a separator. Valid formats include: YYYYMMDD, MMDDYYYY, DDMMYYYY, YYYY/MM/DD, MM/DD/YYYY, and DD/MM/YYYY, where the separator can be any character.

Primary Care Provider

The provider key for the member's primary care physician. A single health care physician may have multiple provider IDs in your input claims data, but this person should have only one provider key.

Provider Specialty Type

This code represents the specialty of the primary care physician.

Medical Flag

Identifies whether the member has medical coverage (Y or N).

Pharmacy Flag

Identifies whether the member has pharmacy coverage (Y or N).

INGENIX

2007 Benchmarks

									Result Flag Distribution				
Report Case ID	Case Description	Summary Rule ID	Rule Cat. Desc.	Rule Type	Rule Description	Compliance Rate	Non-Compliance Rate	Yes Rate	Y	N	Q	NRX	NA (total)
0	Global Rules	9179002	Global Encounter	CP-C	Patient(s) currently taking a COX-2 inhibitor without a documented indication.	46	54	54	54	46	0	0	0
0	Global Rules	9180015	Global Drug Monitoring	S-M	Adult patient(s) taking warfarin that had three or more prothrombin time tests in last 6 reported months.	69	31	69	69	31	0	0	0
0	Global Rules	9180016	Global Drug Monitoring	S-M	Adult patient(s) taking a statin-containing medication nicotinic acid or fibric acid derivative that had an annual serum ALT	81	19	81	81	19	0	0	0
100311	Diabetes	9000023	Patient Safety	S-M	Patient(s) taking a biguanide (e.g. metformin) ACE-inhibitor or angiotensin II receptor antagonist that had a serum	80	20	80	50	12	0	0	38
100311	Diabetes	9000027	Care Pattern	CP-I	Patient(s) that had an office visit for diabetes care in last 6 reported months.	78	22	78	78	22	0	0	0
100311	Diabetes	9000043	Disease Management	R-2	Adult(s) that had a serum creatinine in last 12 reported months.	76	24	76	75	24	0	0	2
100404	Asthma	9000007	Care Pattern	CP-I	Patient(s) that had an office visit for asthma care in last 6 reported months.	58	42	58	58	42	0	0	0
102500	HTN	9000011	Care Pattern	CP-I	Patient(s) that had an annual physician	82	18	82	82	18	0	0	0
102500	HTN	9000012	Care Pattern	CP-I	Patient(s) that had a serum creatinine in last 12 reported months.	68	32	68	68	32	0	0	0
103300	COPD	9000003	Care Pattern	CP-I	Patient(s) that had an annual physician	81	19	81	81	19	0	0	0
103300	COPD	9000006	Disease Management	R-1	Patient(s) with frequent short-acting inhaled bronchodilator use who are also using a long-acting inhaled bronchodilator.	64	36	64	2	1	0	0	97
103500	Hyperlipidemia	9000006	Care Pattern	CP-I	Patient(s) with a LDL cholesterol test in last 12 reported months.	80	20	80	80	20	0	0	0
103500	Hyperlipidemia	9000012	Care Pattern	CP-I	Patient(s) with a HDL cholesterol test in last 12 reported months.	80	20	80	80	20	0	0	0
103500	Hyperlipidemia	9000014	Care Pattern	CP-I	Patient(s) with a triglyceride test in last 12 reported months.	80	20	80	80	20	0	0	0
104000	Migraine	9000006	Care Pattern	CP-I	Adult patient(s) with frequent use of acute medications that also received prophylactic medications.	62	38	62	2	1	0	0	96
104200	CKD	9000027	Disease Management	R-1	Patient(s) with proteinuria currently taking an ACE-inhibitor or angiotensin II receptor	69	31	69	19	9	0	0	72
104700	Prostate CA - I	9000006	Care Pattern	CP-I	Patient(s) that had a prostate specific antigen test in last 12 reported months.	80	20	80	80	20	0	0	0

INGENIX

2007 Benchmarks

									Result Flag Distribution				
Report Case ID	Case Description	Summary Rule ID	Rule Cat. Desc.	Rule Type	Rule Description	Compliance Rate	Non-Compliance Rate	Yes Rate	Y	N	Q	NRX	NA (total)
104700	Prostate CA -	9000007	Care Pattern	CP-I	Patient(s) that had an annual physician	87	13	87	87	13	0	0	0
201200	Sinusitis Acute	9000002	Care Pattern	CP-I	Patient(s) treated with an antibiotic for acute sinusitis that received a first line	62	38	62	31	19	0	0	50
201500	Pregnancy Management	9000001	Care Pattern	CP-N	Pregnant women that had HIV testing.	66	34	66	66	34	0	0	0
201500	Pregnancy Management	9000003	Care Pattern	CP-I	Pregnant women less than 25 years of age that had chlamydia screening.	67	33	67	8	4	0	0	88
201500	Pregnancy Management	9000005	Care Pattern	CP-N	Pregnant women that had ABO and Rh blood type testing.	82	18	82	82	18	0	0	0
201500	Pregnancy Management	9000006	Care Pattern	CP-I	Pregnant women that had syphilis screening.	84	16	84	84	16	0	0	0
201500	Pregnancy Management	9000007	Care Pattern	CP-I	Pregnant women that had urine culture.	59	41	59	59	41	0	0	0
201500	Pregnancy Management	9000008	Care Pattern	CP-I	Pregnant women that had HBsAg testing.	83	17	83	83	17	0	0	0
201500	Pregnancy Management	9000009	Disease Management	R-2	Pregnant women that received Group B Streptococcus testing.	71	29	71	69	28	0	0	4

INGENIX

Overview of Facility Event Methodology

A Facility Event is a unique collection of services performed for a particular member by one to many providers, representing an admission, emergency department visit, or outpatient surgery. There are four types of Facility Events:

1. Confinement/Admission (FIP)
2. Outpatient Surgery (FOS)
3. Emergency Room (FER)
4. Other (OTH)

Each Facility Event Type has a unique set of rules to identify claim detail records as trigger records. A trigger record is a record that meets the criteria for the basis of an event. A trigger record, in turn, serves as a sort of "magnet" for associating additional related claim detail records.

Claim data elements required to trigger specific event types and service date time period:

1. Confinement/Admission (FIP)
   - A confinement record (created by the Confinement/Admission methodology described below) with a revenue code representing inpatient accommodation room and board (revenue code of 0100-0219) triggers a Confinement/Admission (FIP) Event Type.
     - Confinement/Admission Methodology:
       - Confinement/Admission definition: Confinement/Admission represents a member's uninterrupted stay for a defined period of time in a hospital, skilled nursing facility, or other approved health care facility or program, followed by discharge from that same facility or program.
       - A confinement is assigned to a set of one or more medical claim records on which there is:
         1. The same unique patient ID
         2. The same unique provider ID
         3. An inpatient accommodation room and board revenue code of 0100-0219
         4. No gap in dates of service
       - The beginning and the ending dates of the confinement period are identified using the **From** and **Through** dates from the facility claim.
       - In order for multiple inpatient accommodation room and board records to be regarded as one confinement, the following condition must be met:
         - The difference between the **Through date** of the first accommodation room and board revenue code record and the **From date** of the next accommodation room and board revenue code record must be less than or equal to 1 day. The beginning of the confinement represents the earliest **From date** and the ending of the confinement represents the latest **Through date**. If a record has overlapping dates, the record will be included in the confinement for which the record's **From date** and **Through date** are between the dates of the confinement inclusive. If the difference between the **Through date** and the **From date** is > 1, then the next record represents a new confinement.

   - The timeframe for claims included in a Confinement/Admission Facility Event is one day prior to the Confinement admission date through the discharge date of the confinement.

2. Outpatient Surgery (FOS)
   - A claim record based on a CMS Place of Service code representing an outpatient acute care facility or office/clinic, and a Procedure Code Service Type of Surgical Procedures or a Revenue Code representing operating room or ambulatory surgery services triggers an Outpatient Surgery Event.
     - A POS code of 05, 06, 07, 08, 22, or 24 AND a procedure code (CPT or HCPCS) with a Service_Type_High_Code='SURG' (there are 5808 CPT codes and 341 HCPCS codes that fall into this category—see attached list of codes)

FOS_procedure codes.xls

     - **OR** a POS code of 05, 06, 07, 08, 11, 22, 24, 25, 26, 49, 50 or 72 AND a Revenue Code of 0360, 0361, 0369, 0490, 0499.

   - The service date timeframe for claims included in an OP Surgery event is up to +/- 2 days of the service date on the trigger record.
   - To create an Outpatient Surgery event, the claim detail must *not* meet the coding conditions listed for an Admission/Confinement (FIP) event.

3. Emergency Room (FER)
   - An Emergency Room Event is identified on a claim record in which the CPT code or revenue code stands for emergency room or emergency evaluation and management, and the provider specialty represents General Hospital, Psychiatric Hospital or Emergency Care Center.
     - A revenue code of 0450-0452 or 0459
     - **OR** CPT procedure code 99281-99285, 99288 or HCPCS procedure code G0380-G0384 AND a Detail Level Provider Category of General Hospital, Psychiatric Hospital or Emergency Care Center.
     - **OR** CPT procedure code 99281-99285, or 99288 or HCPCS procedure code G0380-G0384 AND [there is at least one other claim detail record which will be associated with the trigger record with a revenue code that is *not* 0456 (Urgent Care) AND a Detail Level Provider Category of General Hospital, Psychiatric Hospital or Emergency Care Center].
   - The service date timeframe for claims included in an Emergency Room (FER) event are up to +/- 2 days of the service date on the trigger record.
   - To create an Emergency Room event, the claim detail must *not* meet any of the coding conditions for an Admission/Confinement (FIP) or Outpatient Surgery (FOS) event.

4. Other (OTH)
   - All service records that are not assigned FIP, FOS, or FER are assigned OTH

Result/EBM/Compliance Flags

Result Flags and Values

The Result flag provides a status for each clinical rule in any condition for which the member has qualified. The five possible Result flag values are described below.

- Yes means the answer to the clinical question is yes.
- No means the answer to the clinical question is no.
- NA (not applicable) means the rule is not applicable to the member. A rule may not be applicable for a number of reasons. The third character of the NA flag contains a number which further defines the reason (see below).
- NRX (no RX benefit) indicates that the member did not have any pharmacy benefit during the reporting period. The NRX value is only applicable to certain rules that are pharmacy dependent.
- Q (questionable) indicates that the member has no claim record for the particular test or treatment during the time window of the rule, but the member did not have coverage throughout the time window or there was insufficient time range of input claims data, and hence, there may be data incompleteness. The Q value is applied only for certain rules and certain setup configurations.

Result Flag Value	Description
NA1	Member did not meet the age or gender criteria.
NA2	Member was not currently taking the medication in question or had not taken it for the required duration.
NA3	Member was taking the medication, but a possession ratio could not be computed [less than two prescriptions during the rule time window].
NA4	Member did not meet the rule specific criteria [e.g., co-morbidity, complexity (diagnosis and medication), intervention not warranted].
NA5	No lab result record or insufficient information.
NA6	Member admitted to a hospital or long term care facility which might cause data incompleteness.
NA7	Member who did not receive treatment or medication had a contraindication or other justification.

EBM Flag

The EBM flag provides a counter for rules in which the result is NOT consistent with evidence based guidelines. There are two possible results for the EBM flag counter:

- 1 when a result is ***not*** consistent with the EBM Connect software's evidence based guidelines, and
- 0 when any of the following are true:
  - the member's care is consistent with the software's evidence based guidelines
  - the rule is not relevant to the member
  - there is insufficient information in the database to analyze the rule
  - the rule is informational only, and does not reflect appropriateness of care

Compliance Flag

The Compliance flag provides a counter for cases in which the result ***is*** consistent with evidence based guidelines. There are two possible results for the Compliance flag counter:

- 1 when a result ***is*** consistent with the EBM Connect software's evidence based guidelines, and
- 0 when any of the following are true:
  - the member's care is not consistent with the software's evidence based guidelines
  - the rule is not relevant to the member
  - there is insufficient information in the database to analyze the rule
  - the rule is informational only, and does not reflect appropriateness of care

THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0

August 2008

The measure information you submit will be shared with NQF's Steering Committees and Technical Advisory Panels to evaluate measures against the NQF criteria of importance to measure and report, scientific acceptability of measure properties, usability, and feasibility. Four conditions (as indicated below) must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards. Not all acceptable measures will be strong—or equally strong—among each set of criteria. The assessment of each criterion is a matter of degree; however, all measures must be judged to have met the first criterion, importance to measure and report, in order to be evaluated against the remaining criteria. References to the specific measure evaluation criteria are provided in parentheses following the item numbers. Please refer to the *Measure Evaluation Criteria* for more information at *www.qualityforum.org* under Core Documents. Additional guidance is being developed and when available will be posted on the NQF website.

Use the tab or arrow (↓→) keys to move the cursor to the next field (or back ←↑). There are three types of response fields:

- drop-down menus - select one response;
- check boxes – check as many as apply; and
- text fields – you can copy and paste text into these fields or enter text; these fields are not limited in size, but in most cases, we ask that you summarize the requested information.

Please note that URL hyperlinks do not work in the form; you will need to type them into your web browser.

Be sure to answer all questions. Fields that are left blank will be interpreted as no or none. Information must be provided in this form. Attachments are not allowed except when specifically requested or to provide additional detail or source documents for information that is summarized in this form. If you have important information that is not addressed by the questions, they can be entered into item #48 near the end of the form.

For questions about this form, please contact the NQF Project Director listed in the corresponding call for measures.

	CONDITIONS FOR CONSIDERATION BY NQF
	Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards.
A (A)	*Public domain or Intellectual Property Agreement signed: IP Agreement signed and submitted (If no, do not submit)* *Template for the Intellectual Property Agreement is available at www.qualityforum.org under Core Documents.*
B (B)	*Measure steward/maintenance: Is there an identified responsible entity and process to maintain and update the measure on a schedule commensurate with clinical innovation, but at least every 3 years?* *Yes, information provided in contact section (If no, do not submit)*
C (C)	*Intended use: Does the intended use of the measure include BOTH public reporting AND quality improvement? Yes (If no, do not submit)*
D (D)	*Fully developed and tested: Is the measure fully developed AND tested? Yes, fully developed and tested (If not tested and no plans for testing within 24 months, do not submit)*

THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0

August 2008

	(for NQF staff use) NQF Review #: EC-096-08 NQF Project: National Voluntary Consensus Standards for Ambulatory Care Using Clinicalyl Enriched Administrative Data
	MEASURE SPECIFICATIONS & DESCRIPTIVE INFORMATION
1	*Information current as of (date- MM/DD/YY): 6/22/09*
2	*Title of Measure: Adult(s) with diabetes mellitus that had a serum creatinine in last 12 reported months.*
3	**Brief description of measure [1]:** This measure identifies adults with diabetes mellitus that had a serum creatinine test in last 12 reported months.
4 (2a)	**Numerator Statement:** Was there a test for serum creatinine (code set PR0081, LC0033) or an ACE/ARB therapeutic monitoring test (code set PR0272) during the following time period: 12 months report period through 90 days after the end of the report period? **Time Window:** 12 months prior to the end of the report period through 90 days after the end of the report period **Numerator Details** (Definitions, codes with description): see attached "Ingenix DM Code Sets NQF" excel document for codes with descriptions
5 (2a)	**Denominator Statement:** For condition confirmation, the following criteria must be met: 1. All males or females 18-75 years of age at the end of the report period 2. Patient must have been continuously enrolled: Medical benefits throughout the 12 months prior to the end of the report period AND Pharmacy benefit plan for 6 months prior to the end of the report period Note: The standard enrollment break logic allows unlimited breaks of no more than 45 days and no breaks greater than 45 days. 3. Either one of the following criteria (A or B): A. The patient is listed on the Disease Registry Input File for this condition, if a Disease Registry Input File is available. OR B. During the 24 months prior to the end of the report period, did the patient meet any of the following criteria: Patient has 2 or more outpatient or nonacute inpatient encounters (HEDIS) (code set PR0199, RV0199, PR0195, RV0195), where the diagnosis is Diabetes (HEDIS) (code set DX0227) OR Patient has 1 or more acute inpatient or emergency department encounters (HEDIS) (code set PR0330, RV0330, PR0194, RV0194), where the diagnosis is Diabetes (HEDIS) (code set DX0227) OR Patient has 1 or more prescriptions for Insulin or Oral Hypoglycemics/Antihyperglycemics (HEDIS) (code set RX0221) **Time Window:** 24 months prior to the end of the report period **Denominator Details** (Definitions, codes with description): see attached "Ingenix DM Code Sets NQF" excel

[1] Example of measure description: Percentage of adult patients with diabetes aged 18-75 years receiving one or more A1c test(s) per year.

	document for codes with descriptions
6 (2a, 2d)	**Denominator Exclusions:** During the 12 months prior to the end of the report period, did the patient have 1 or more of the following services or events, where the diagnosis was Polycystic Ovaries (code set DX0312), Gestational Diabetes (DX0313), or Steroid-induced Diabetes (DX0314): ▫ Professional Encounter Code Set (code set PR0107, RV0107) ▫ Professional Supervision (code set PR0108) ▫ Facility Event – Confinement/Admission ▫ Facility Event – Emergency Room ▫ Facility Event – Outpatient Surgery **Denominator Exclusion Details** (Definitions, codes with description): see attached "Ingenix DM Code Sets NQF" excel document for codes with descriptions
7 (2a, 2h)	**Stratification** Do the measure specifications require the results to be stratified? No ► If "other" describe: **Identification of stratification variable(s):** **Stratification Details** (Definitions, codes with description):
8 (2a, 2e)	**Risk Adjustment** Does the measure require risk adjustment to account for differences in patient severity before the onset of care? No ► **If yes,** (select one) ► Is there a separate proprietary owner of the risk model? (select one) **Identify Risk Adjustment Variables:** **Detailed risk model:** attached ☐ **OR** Web page URL:
9 (2a)	**Type of Score:** Rate/proportion **Calculation Algorithm:** attached ☒ **OR** Web page URL: **Interpretation of Score** (*Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score*) Better quality = Higher score ► If "Other", please describe:
10 (2a. 4a, 4b)	**Identify the required data elements**(e.g., primary diagnosis, lab values, vital signs)**:** ICD-9 codes (alternatively, a disease registry can be used for this condition to identify patients with diabetes mellitus), CPT codes, Revenue codes **Data dictionary/code table** attached ☒ **OR** Web page URL: **Data Quality** (2a) *Check all that apply* ☐ Data are captured from an authoritative/accurate source (e.g., lab values from laboratory personnel) ☒ Data are coded using recognized data standards ☒ Method of capturing data electronically fits the workflow of the authoritative source ☐ Data are available in EHRs ☒ Data are auditable
11 (2a, 4b)	**Data Source and Data Collection Methods** *Identifies the data source(s) necessary to implement the measure specifications. Check all that apply* ☐ Electronic Health/Medical Record ☐ Electronic Clinical Database, Name: ☐ Electronic Clinical Registry, Name: ☒ Electronic Claims ☐ Electronic Pharmacy data ☐ Electronic Lab data ☐ Electronic source – other, Describe: ☐ Paper Medical Record ☐ Standardized clinical instrument, Name: ☐ Standardized patient survey, Name: ☐ Standardized clinician survey, Name: ☐ Other, Describe: Instrument/survey attached ☐ **OR** Web page URL:
12 (2a)	**Sampling** *If measure is based on a sample, provide instructions and guidance on sample size.* **Minimum sample size:** not applicable

	Instructions:
13 (2a)	**Type of Measure:** Process ► If "Other", please describe: ► If part of a composite or paired with another measure, please identify composite or paired measure Not applicable
14 (2a)	**Unit of Measurement/Analysis** (*Who or what is being measured*) *Check all that apply.* ☐ Can be measured at all levels ☒ Individual clinician (e.g., physician, nurse) ☒ Group of clinicians (e.g., facility department/unit, group practice) ☐ Facility (e.g., hospital, nursing home) ☒ Integrated delivery system ☒ Health plan ☒ Community/Population ☐ Other (*Please describe*):
15 (2a)	**Applicable Care Settings** *Check all that apply* ☐ Can be used in all healthcare settings ☒ Ambulatory Care (office/clinic) ☐ Behavioral Healthcare ☐ Community Healthcare ☐ Dialysis Facility ☐ Emergency Department ☐ EMS emergency medical services ☐ Health Plan ☐ Home Health ☐ Hospice ☐ Hospital ☐ Long term acute care hospital ☐ Nursing home/ Skilled Nursing Facility (SNF) ☐ Prescription Drug Plan ☐ Rehabilitation Facility ☐ Substance Use Treatment Program/Center ☐ Other (*Please describe*):
	IMPORTANCE TO MEASURE AND REPORT
	Note: This is a threshold criterion. If a measure is not judged to be sufficiently important to measure and report, it will not be evaluated against the remaining criteria.
16 (1a)	**Addresses a Specific National Priority Partners Goal** *Enter the numbers of the specific goals related to this measure (see list of goals on last page)*: 6.1
17 (1a)	**If not related to NPP goal, identify high impact aspect of healthcare** (select one) **Summary of Evidence:** **Citations[2] for Evidence:**
18 (1b)	**Opportunity for Improvement** *Provide evidence that demonstrates considerable variation, or overall poor performance, across providers.* **Summary of Evidence:** Using a geographically diverse 12 million member benchmark database (this database represents predominately a commercial population less than 65 year of age) the compliance rate was 76 percent, indicating a clear gap in care and opportunity for care improvement. **Citations for Evidence:** Ingenix EBM Connect benchmark results, December 2007
19 (1b)	**Disparities** *Provide evidence that demonstrates disparity in care/outcomes related to the measure focus among populations.* **Summary of Evidence:** Not applicable **Citations for evidence:**
20 (1c)	**If measuring an Outcome** Describe relevance to the national health goal/priority, condition, population, and/or care being addressed: not applicable **If not measuring an outcome, provide evidence supporting this measure topic and grade the strength of the evidence** *Summarize the evidence (including citations to source) supporting the focus of the measure as follows:*

[2] Citations can include, but are not limited to journal articles, reports, web pages (URLs).

	• Intermediate outcome – evidence that the measured intermediate outcome (e.g., blood pressure, Hba1c) leads to improved health/avoidance of harm or cost/benefit. • Process – evidence that the measured clinical or administrative process leads to improved health/avoidance of harm and if the measure focus is on one step in a multi-step care process, it measures the step that has the greatest effect on improving the specified desired outcome(s). • Structure – evidence that the measured structure supports the consistent delivery of effective processes or access that lead to improved health/avoidance of harm or cost/benefit. • Patient experience – evidence that an association exists between the measure of patient experience of health care and the outcomes, values and preferences of individuals/ the public. • Access – evidence that an association exists between access to a health service and the outcomes of, or experience with, care. • Efficiency– demonstration of an association between the measured resource use and level of performance with respect to one or more of the other five IOM aims of quality. **Type of Evidence** *Check all that apply* ☒ Evidence-based guideline ☐ Quantitative research studies ☐ Meta-analysis ☐ Qualitative research studies ☐ Systematic synthesis of research ☐ Other (*Please describe*): **Overall Grade for Strength of the Evidence**[3] (*Use the USPSTF system, or if different, also describe how it relates to the USPSTF system)*: This is an E level of evidence recommendation from the ADA: Expert consensus or clinical experience. This would be equivalent to the USPSTF grade B classification. **Summary of Evidence** (*provide guideline information below*): Diabetic nephropathy occurs in 20-40% of patients with diabetes and is the single leading cause of end stage renal disease (ESRD). An annual serum creatinine is recommended for all adults with diabetes for estimation of the glomerular filtration rate (GFR) (1). **Citations for Evidence:** 1. American Diabetes Association. Standards of Medical Care in Diabetes - 2008. Diabetes Care 2008;31 (suppl 1):S12-54.
21 (1c)	**Clinical Practice Guideline** *Cite the guideline reference; quote the specific guideline recommendation related to the measure and the guideline author's assessment of the strength of the evidence; and summarize the rationale for using this guideline over others.* **Guideline Citation:** 1. American Diabetes Association. Standards of Medical Care in Diabetes - 2008. Diabetes Care 2008;31 (suppl 1):S12-54. **Specific guideline recommendation:** Measure serum creatinine at least annually in all adults with diabetes regardless of the degree of urine albumin excretion. The serum creatinine should be used to estimate GFR and stage the level of chronic kidney disease (CKD), if present. (E Level of Evidence) **Guideline author's rating of strength of evidence** (*If different from USPSTF, also describe it and how it relates to USPSTF)*: This is an E level of evidence recommendation from the ADA: Expert consensus or clinical experience. This would be equivalent to the USPSTF grade B classification. **Rationale for using this guideline over others:** There are no other national guidelines that address the frequency of this monitoring.
22	**Controversy/Contradictory Evidence** *Summarize any areas of controversy, contradictory evidence, or*

[3]The strength of the body of evidence for the specific measure focus should be systematically assessed and rated, e.g., USPSTF grading system www.ahrq.gov/clinic/uspstmeth.htm: A - The USPSTF recommends the service. There is high certainty that the net benefit is substantial. B - The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial. C - The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is at least moderate certainty that the net benefit is small. Offer or provide this service only if other considerations support the offering or providing the service in an individual patient. D - The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. I - The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

(1c)	*contradictory guidelines and provide citations.* **Summary:** None **Citations:**
23 (1)	**Briefly describe how this measure (as specified) will facilitate significant gains in healthcare quality related to the specific priority goals and quality problems identified above:** It will facilitate early diagnosis and management of kidney disease in the diabetic population.
	SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES
	Note: Testing and results should be summarized in this form. However, additional detail and reports may be submitted as supplemental information or provided as a web page URL. If a measure has not been tested, it is only potentially eligible for time-limited endorsement.
24	**Supplemental Testing Information:** attached ☒ **OR** Web page URL:
25 (2b)	**Reliability Testing** **Data/sample:** description attached, see "Testing" document **Analytic Method:** description attached, see "Testing" document **Testing Results:** see attached document, "Benchmark test results"
26 (2c)	**Validity Testing** **Data/sample:** description attached, see "Testing" document **Analytic Method:** description attached, see "Testing" document **Testing Results:** see attached document, "Benchmark test results"
27 (2d)	**Measure Exclusions** *Provide evidence to justify exclusion(s) and analysis of impact on measure results during testing.* **Summary of Evidence supporting exclusion(s):** Polycystic ovaries, gestational diabetes, and steroid-induced diabetes are exclusion criteria consistent with the HEDIS diabetes measures. These exclusion criteria were added at the request of the NQF workgroup. **Citations for Evidence:** as above **Data/sample:** **Analytic Method:** **Testing Results:**
28 (2e)	**Risk Adjustment Testing** *Summarize the testing used to determine the need (or no need) for risk adjustment and the statistical performance of the risk adjustment method.* **Data/sample:** not applicable **Analytic Method:** **Testing Results:** ►**If outcome or resource use measure not risk adjusted, provide rationale:**
29 (2g)	**Testing comparability of results when more than 1 data method is specified** (*e.g., administrative claims or chart abstraction*) **Data/sample:** description attached, see "Testing" document

	Analytic Method: **Results:**
30 (2f)	**Provide Measure Results from Testing or Current Use** Results from testing **Data/sample:** see attached document, "Benchmark test results" **Methods to identify statistically significant and practically/meaningfully differences in performance:** **Results:**
31 (2h)	**Identification of Disparities** ►If measure is stratified by factors related to disparities (i.e. race/ethnicity, primary language, gender, SES, health literacy), **provide stratified results:** not applicable ►If disparities have been reported/identified, but measure is not specified to detect disparities, provide rationale:
	USABILITY
32 (3)	*Current Use In use If in use, how widely used Other ► If "other," please describe: Health plans, physicians (individuals and groups), care management, and other vendors/customers are using this on a national level.* ☐ *Used in a public reporting initiative, name of initiative:* *Sample report attached* ☐ *OR Web page URL:*
33 (3a)	**Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **Data/sample:** Results are summarized and reported by users/customers depending on their business need. Therefore, this is no single public reporting format. **Methods:** **Results:**
34 (3b, 3c)	**Relation to other NQF-endorsed™ measures** ►Is this measure similar or related to measure(s) already endorsed by NQF (on the same topic or the same target population)? *Measures can be found at www.qualityforum.org under Core Documents.* *Check all that apply* ☐ Have not looked at other NQF measures ☐ Other measure(s) on same topic ☒ Other measure(s) for same target population ☐ No similar or related measures **Name of similar or related NQF-endorsed™ measure(s):** HEDIS® Comprehensive Diabetes Care **Are the measure specifications harmonized with existing NQF-endorsed™ measures?** Partially harmonized ►If not fully harmonized, provide rationale: We use nearly identical condition confirmation for identification of patients with diabetes mellitus. For this measure, we include the HEDIS® lists polycystic ovaries, gestational diabetes, and steroid-induced diabetes exclusion criteria and we use the same age range. We differ in that we allow use of a disease registry for condition confirmation - this allows other data sources to identify the target polulation. **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** This measure identifies diabetic patients who are receiving a serum creatinine at a minimum recommended interval. This adds value to existing NQF endorsed measures by addressing a recommended aspect of care that is not represented by current NQF endorsed measures.

	FEASIBILITY
35 (4a)	*How are the required data elements generated? Check all that apply* ☐ *Data elements are generated concurrent with and as a byproduct of care processes during care delivery (e.g., blood pressure or other assessment recorded by personnel conducting the assessment)* ☐ *Data elements are generated from a patient survey (e.g., CAHPS)* ☒ *Data elements are generated through coding performed by someone other than the person who obtained the original information (e.g., DRG or ICD-9 coding on claims)* ☐ *Other, Please describe:*
36 (4b)	*Electronic Sources* All data elements ►*If all data elements are not in electronic sources, specify the near-term path to electronic collection by most providers:* ►*Specify the data elements for the electronic health record:* none are specific to nor dependent on EHR
37 (4c)	*Do the specified exclusions require additional data sources beyond what is required for the other specifications?* No ►*If yes, provide justification:*
38 (4d)	*Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure:* If a monitoring test is performed and the specific CPT code is not submitted, then a false negative result will be generated. *Describe how could these potential problems be audited:* A chart review audit could define the frequency of this error type. *Did you audit for these potential problems during testing?* No *If yes, provide results:*
39 (4e)	*Testing feasibility Describe what have you learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:* Testing of this measure did not identify any concerns that would cause us to modify code sets or overall logic. Also, cutomers have not notified us of any concerns about the performance of this measure.
	CONTACT INFORMATION
40	*Web Page URL for Measure Information Describe where users (implementers) should go for more details on specifications of measures, or assistance in implementing the measure.* *Web page URL:* To be defined
41	**Measure Intellectual Property Agreement Owner Point of Contact** **First Name:** Cheri **MI:** **Last Name:** DiGiovanni **Credentials (MD, MPH, etc.):** **Organization:** Ingenix **Street Address:** 1050 Carol Street **City:** Downers Grove **State:** IL **ZIP:** 60516 **Email:** cheri.digiovanni@ingenix.com **Telephone:** 602-276-8913 ext:
42	**Measure Submission Point of Contact** **If different than IP Owner Contact** **First Name:** Kay **MI:** E **Last Name:** Schwebke **Credentials (MD, MPH, etc.):** MD, MPH **Organization:** Ingenix **Street Address:** 12125 Technology Drive **City:** Eden Prairie **State:** MN **ZIP:** 55344 **Email:** kay.schwebke@ingenix.com **Telephone:** 952-833-7154 ext:
43	**Measure Developer Point of Contact** **If different than IP Owner Contact** **First Name:** Kay **MI:** E **Last Name:** Schwebke **Credentials (MD, MPH, etc.):** MD, MPH **Organization:** As above **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext:

44	**Measure Steward Point of Contact** **If different than IP Owner Contact** *Identifies the organization that will take responsibility for updating the measure and assuring it is consistent with the scientific evidence and current coding schema; the steward of the measure may be different than the developer.* **First Name:** Kay **MI:**E **Last Name:**Schwebke **Credentials (MD, MPH, etc.):** MD, MPH **Organization:** As above **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext
	ADDITIONAL INFORMATION
45	**Workgroup/Expert Panel involved in measure development** Workgroup/panel used ►If workgroup used, describe the members' role in measure development: Reviewed relevant research/guideline, participated in the development of measure logic, reviewed code sets, reviewed benchmark results ►Provide a list of workgroup/panel members' names and organizations: see document, "Consultant panel members"
46	*Measure Developer/Steward Updates and Ongoing Maintenance* *Year the measure was first released: June 2007* *Month and Year of most recent revision: June 2007* *What is the frequency for review/update of this measure? Consultant panel review due March 2009, and then every 2-3 years* *When is the next scheduled review/update for this measure? March 2009*
47	**Copyright statement/disclaimers:** see attached "DM ebm Alg" document
48	**Additional Information:** In addition to the attachments referenced above, the following documents are attached. 1. EBM70Technical document 2. EBM70Concepts document Also, our next EBM Connect release, scheduled for November 2008, will include annual code set updates. Therefore, code sets submitted October 2008 might change slightly due to this routine maintenance process. The anticipated impact is minimal.
49	**I have checked that the submission is complete and any blank fields indicate that no information is provided.** ☒
50	**Date of Submission** (*MM/DD/YY*)**:** 6/22/09

PATIENT & FAMILY ENGAGEMENT

PRIORITY STATEMENT: Engage Patients and Their Families in Managing Their Health and Making Decisions About Their Care

1.1. All providers will routinely solicit and publicly report on their patients' perspectives of care

1.2. All providers will work collaboratively with their patients to assist them in making informed decisions about treatment options consistent with their values and preferences

POPULATION HEALTH

PRIORITY STATEMENT: IMPROVE THE HEALTH OF THE U.S. POPULATION

2.1. The population will be up to date on all high-priority age- and gender-appropriate evidence-based clinical preventive services

2.2. The population will receive recommended evidence-based interventions to improve targeted healthy lifestyle behaviors

2.3. All communities will demonstrate a 10% improvement in their community index of health

2.4. Americans will have all recommended high priority healthy lifestyle behaviors under control

SAFETY

PRIORITY STATEMENT: IMPROVE THE SAFETY OF THE U.S. HEALTH CARE SYSTEM

3.1. All providers will drive all preventable healthcare-associated infections (HAI) to zero

3.2. All providers will drive the incidence of preventable NQF Serious Reportable Events (SRE) to zero

3.3. All hospitals will reduce preventable and premature mortality rates to best-in-class

3.4. All hospitals and their community partners will reduce 30-day mortality rates following hospitalization for select conditions to best-in-class

PALLIATIVE CARE

PRIORITY STATEMENT: GUARANTEE APPROPRIATE AND COMPASSIONATE CARE FOR PATIENTS WITH LIFE-LIMITING ILLNESSES

4.1. All providers will identify, document, and effectively treat physical symptoms (e.g. pain, shortness of breath, constipation, others) at levels acceptable to patients with a life-limiting illness

4.2. All providers will effectively address the psychosocial and spiritual needs of patients with life-limiting illnesses and their families according to their preferences

4.3. All eligible patients will receive high quality palliative care and hospice services

CARE COORDINATION

PRIORITY STATEMENT: ENSURE PATIENTS RECEIVE WELL-COORDINATED CARE ACROSS ALL PROVIDERS, SETTINGS, AND LEVELS OF CARE

5.1. All providers will accurately and completely reconcile medications across the continuum of care (i.e. admission, transfer within and between care providers, discharge, and outpatient appointments) and ensure communication with the next provider of services

5.2. All inpatient and outpatient providers will assess the patient's perspective of the coordination of their care using a validated care coordination survey tool

5.3. All providers will reduce 30-day all-cause readmission rates resulting from poorly coordinated care to best-in-class

5.4. All providers will reduce preventable emergency department (i.e. those that could be avoided with timely access to primary care) visits resulting from poorly coordinated care by 50%

PATIENT-FOCUSED CARE

PRIORITY STATEMENT: GUARANTEE HIGH VALUE CARE ACROSS ACUTE AND CHRONIC EPISODES

6.1. All patients will receive high-value care over the course of their acute or chronic illness

OVERUSE

PRIORITY STATEMENT: ELIMINATE WASTE WHILE ENSURING THE DELIVERY OF APPROPRIATE CARE

7.1. Reduce wasteful and inappropriate care for the top ten targeted areas by 50%

INGENIX®

Algorithm

Diabetes Mellitus

Report Case ID: 100311

Version 7.5

INGENIX

Diabetes Mellitus
Table Of Contents
Report Case ID: 100311

Code Sets Utilized

Diagnosis Code Sets	DX0227 Diabetes (HEDIS)
Procedure and Revenue Code Sets	PR0081 Serum Creatinine PR0111 Ambulatory Visit RV0111 Ambulatory Visit PR0194 Emergency Department Visits (HEDIS) RV0194 Emergency Department Visits (HEDIS) PR0195 Nonacute Inpatient Visits (HEDIS) RV0195 Nonacute Inpatient Visits (HEDIS) PR0199 Outpatient Visits, DM (HEDIS) RV0199 Outpatient Visits, DM (HEDIS) PR0330 Acute Inpatient Visits, DM (HEDIS) RV0330 Acute Inpatient Visits,DM (HEDIS) PR0272 ACE/ARB Therapeutic Monitoring Test
Rx Code Sets	RX-3 ACE-Inhibitor-containing medication RX-11 Angiotensin II Receptor Antagonist-containing medication RX-59 Insulin RX-175 Glucometers RX-176 Blood Glucose Test Strips RX-182 Biguanide-containing medication RX0221 Insulin or Oral Hypoglycemics/Antihyperglycemics (HEDIS)

Study Population

Time Frame Requirements

Period	Backward	Forward
Report Period	12m	
Minimum Medical Coverage	12m	
Minimum Pharmacy Coverage	6m	
Medical Claims Extraction	24m	3m
Pharmacy Claims Extraction	12m	3m
Determine Condition (Denom)	24m	
Determine Treatment (Num)	12m	
Physician Attribution	12m	

Rules

Report Rule ID	Rule Stmnt	Headings, Rules & Detail Description
Member Demographics		
		All males or females (no age restrictions)
Member Enrollment		
1102002	A B	Patient must have been continuously enrolled: Medical benefits throughout the 12 months prior to the end of the report period **AND** Pharmacy benefit plan for 6 months prior to the end of the report period *Note: The standard enrollment break logic allows unlimited breaks of no more than 45 days and no breaks greater than 45 days.*
Condition Confirmation		
3128001	A	The patient is listed on the Disease Registry Input File for this condition, if a Disease Registry Input File is available. *Note: Disease Registry is NOT a required input file.*
3109002	A	During the 24 months prior to the end of the report period, did the patient meet any of the following criteria: Patient has 2 or more outpatient or nonacute inpatient encounters (HEDIS) (code set PR0199, RV0199, PR0195, RV0195), where the diagnosis is Diabetes (HEDIS) (code set DX0227) **OR** Patient has 1 or more acute inpatient or emergency department encounters (HEDIS) (code set PR0330, RV0330, PR0194, RV0194), where the diagnosis is Diabetes (HEDIS) (code set DX0227) **OR** Patient has 1 or more prescriptions for Insulin or Oral Hypoglycemics/Antihyperglycemics (HEDIS) (code set RX0221)
Condition Exclusions		
		None

Intervention Rules

Report Rule ID	Rule Type & Task No.	Headings, Rules & Detail Description
Patients taking biguanides (e.g. metformin), thiazolidinediones (e.g. pioglitazone, rosiglitazone), Precose, ACE-inhibitors, or angiotensin II receptor antagonists should have, at a minimum, annual testing of specific serum parameters.		
9000023	**S-M (138)**	**Patient(s) taking a biguanide (e.g. metformin), ACE-inhibitor, or angiotensin II receptor antagonist that had a serum creatinine in last 12 reported months.**
▪ **Result Flag (RF):** ▪ **EBM Flag (EF):** **MCE-Med: 12 Months**		IF (46 = Y OR 49 = Y) AND 50 = Y, set RF to Y, else if NoRx, set RF to NRX, else IF (46 = N AND 49 = N), set RF to NA2, else if MCE met, set RF to N, else set RF to Q IF RF = N, set EF = 1, else set EF = 0 **MCE-Rx: NA**
7123022	A	Did the patient fill a prescription for an ACE-Inhibitor-containing medication (code set RX-3) during the following time period: last 120 days of the report period through 90 days after the end of the report period?
7123025	A	Did the patient fill a prescription for an Angiotensin II Receptor Antagonist-containing medication (code set RX-11) during the following time period: last 120 days of the report period through 90 days after the end of the report period?
7123028	A	Did the patient fill a prescription for a Biguanide-containing medication (code set RX-182) during the following time period: last 120 days of the report period through 90 days after the end of the report period?
7123046	A B	If YES to 22 or YES to 25 AND Was the duration greater than 90 days?
7123049	A B	If YES to 28 AND Was the duration greater than 90 days?
7123050	A	Was there a test for serum creatinine (code set PR0081) or an ACE/ARB therapeutic monitoring test (code set PR0272) during the following time period: 12 months report period through 90 days after the end of the report period?
Patients with DM should have appropriate access to care including, at a minimum, assessment by a physician every 6 months. Patients with suboptimal diabetic control can be identified for additional interventions. Patients with evidence of specific diabetic complications would benefit from endocrinology consultation within 6 months.		
9000027	**CP-I (139)**	**Patient(s) that had an office visit for diabetes care in last 6 reported months.**
▪ **Result Flag (RF):** ▪ **EBM Flag (EF):** **MCE-Med: 180 Days**		IF 59 = Y, set RF to Y, else if MCE met, set RF to N, else set RF to Q IF RF = N, set EF = 1, else set EF = 0 **MCE-Rx: NA**
7123059	A	Did the patient have an ambulatory visit (code set PR0111, RV0111) with a diagnosis of Diabetes (HEDIS) (code set DX0227) during the following time period: last 180 days of the report period through 90 days after the end of the report period?

Report Rule ID	Rule Type & Task No.	Headings, Rules & Detail Description
Patients taking insulin should be self-monitoring their blood glucoses.		
9000030	**R-2 (136)**	**Patient(s) taking insulin with evidence of self-monitoring blood glucose testing.**
▪ **Result Flag (RF):** IF 108 = N, set RF to NA4, else if 66 = Y, set RF to Y, else if MCE met, set RF to N, else set RF to Q ▪ **EBM Flag (EF):** IF RF = N, set EF = 1, else set EF = 0 **MCE-Med: 12 months** **MCE-Rx: 12 months**		
7123066	A	Did the patient fill a prescription for any of the following during the following time period: last 12 months of the report period through 90 days after the end of the report period? ▪ Glucometers (RX-175) ▪ Blood Glucose Test Strips (RX-176)
7123108	A	Did the patient fill a prescription for Insulin (code set RX-59) during the following time period: last 120 days of the report period through 90 days after the end of the report period?
A serum creatinine for estimation of the glomerular filtration rate is recommended annually at minimum for all adults with DM.		
9000043	**R-2 (136)**	**Adult(s) that had a serum creatinine in last 12 reported months.**
▪ **Result Flag (RF):** IF 71 = Y, set RF to NA1, else IF 50 = Y, set RF to Y, else if MCE met, set RF to N, else set RF to Q ▪ **EBM Flag (EF):** IF RF = N, set EF = 1, else set EF = 0 **MCE-Med: 12 months** **MCE-Rx: NA**		
7123071	A	Was the patient's age < 18 years at the end of the report period?

Diagnosis Code Sets

The following tables represent the applicable diagnosis code sets for each condition referenced in the Diabetes Mellitus rules.

DX0227 DIABETES (HEDIS)

ICD-9 Code	Description
250	DIABETES MELLITUS
250.0	DM WITHOUT MENTION OF COMPLICATION
250.00	DIAB W/O COMP TYPE II/UNS NOT STATED UNCNTRL
250.01	DIAB W/O COMP TYPE I [JUV] NOT STATED UNCNTRL
250.02	DIAB W/O MENTION COMP TYPE II/UNS TYPE UNCNTRL
250.03	DIAB W/O MENTION COMP TYPE I [JUV TYPE] UNCNTRL
250.1	DIABETES WITH KETOACIDOSIS
250.10	DIAB W/KETOACIDOS TYPE II/UNS NOT STATED UNCNTRL
250.11	DIAB W/KETOACIDOS TYPE I [JUV] NOT STATE UNCNTRL
250.12	DIABETES W/KETOACIDOSIS TYPE II/UNS TYPE UNCNTRL
250.13	DIABETES W/KETOACIDOSIS TYPE I [JUV] UNCNTRL
250.2	DIABETES WITH HYPEROSMOLARITY
250.20	DIAB W/HYPEROSMOLARITY TYPE II/UNS NOT UNCNTRL
250.21	DIAB W/HYPEROSMOLARITY TYPE I [JUV] NOT UNCNTRL
250.22	DIAB W/HYPEROSMOLARITY TYPE II/UNS TYPE UNCNTRL
250.23	DIAB W/HYPEROSMOLARITY TYPE I [JUV TYPE] UNCNTRL
250.3	DIABETES WITH OTHER COMA
250.30	DIAB W/OTH COMA TYPE II/UNS NOT STATED UNCNTRL
250.31	DIAB W/OTH COMA TYPE I [JUV] NOT STATED UNCNTRL
250.32	DIABETES W/OTH COMA TYPE II/UNS UNCONTROLLED
250.33	DIABETES W/OTH COMA TYPE I [JUV] UNCONTROLLED
250.4	DIABETES WITH RENAL MANIFESTATIONS
250.40	DIAB W/RENAL MANIFESTS TYPE II/UNS NOT UNCNTRL
250.41	DIAB W/RENAL MANIFESTS TYPE I [JUV] NOT UNCNTRL
250.42	DIAB W/RENAL MANIFESTS TYPE II/UNS TYPE UNCNTRL
250.43	DIAB W/RENAL MANIFESTS TYPE I [JUV TYPE] UNCNTRL
250.5	DIABETES WITH OPHTHALMIC MANIFESTATIONS
250.50	DIAB W/OPHTH MANIFESTS TYPE II/UNS NOT UNCNTRL
250.51	DIAB W/OPHTH MANIFESTS TYPE I [JUV] NOT UNCNTRL
250.52	DIAB W/OPHTH MANIFESTS TYPE II/UNS TYPE UNCNTRL
250.53	DIAB W/OPHTH MANIFESTS TYPE I [JUV TYPE] UNCNTRL
250.6	DIABETES WITH NEUROLOGICAL MANIFESTATIONS
250.60	DIAB W/NEURO MANIFESTS TYPE II/UNS NOT UNCNTRL
250.61	DIAB W/NEURO MANIFESTS TYPE I [JUV] NOT UNCNTRL
250.62	DIAB W/NEURO MANIFESTS TYPE II/UNS TYPE UNCNTRL
250.63	DIAB W/NEURO MANIFESTS TYPE I [JUV TYPE] UNCNTRL
250.7	DIABETES WITH PERIPHERAL CIRCULATORY DISORDERS
250.70	DIAB W/PERIPH CIRC D/O TYPE II/UNS NOT UNCNTRL
250.71	DIAB W/PERIPH CIRC D/O TYPE I [JUV] NOT UNCNTRL
250.72	DIAB W/PERIPH CIRC D/O TYPE II/UNS TYPE UNCNTRL

250.73	DIAB W/PERIPH CIRC D/O TYPE I [JUV TYPE] UNCNTRL
250.8	DIABETES WITH OTHER SPECIFIED MANIFESTATIONS
250.80	DIAB W/OTH MANIFESTS TYPE II/UNS NOT UNCNTRL
250.81	DIAB W/OTH MANIFESTS TYPE I [JUV] NOT UNCNTRL
250.82	DIAB W/OTH MANIFESTS TYPE II/UNS TYPE UNCNTRL
250.83	DIAB W/OTH MANIFESTS TYPE I [JUV TYPE] UNCNTRL
250.9	DIABETES WITH UNSPECIFIED COMPLICATION
250.90	DIAB W/UNS COMP TYPE II/UNS NOT STATED UNCNTRL
250.91	DIAB W/UNS COMP TYPE I [JUV] NOT STATED UNCNTRL
250.92	DIAB W/UNSPEC COMP TYPE II/UNSPEC TYPE UNCNTRL
250.93	DIAB W/UNSPEC COMP TYPE I [JUV TYPE] UNCNTRL
357.2	POLYNEUROPATHY IN DIABETES
362.0	DIABETIC RETINOPATHY
362.01	BACKGROUND DIABETIC RETINOPATHY
362.02	PROLIFERATIVE DIABETIC RETINOPATHY
366.41	DIABETIC CATARACT
648.0	MTRN DM COMP PREGNANCY CHILDBIRTH/THE PUERPERIUM
648.00	MTRN DM COMP PG CHLDBRTH/THE PUERPERIUM UNS EOC
648.01	MATERNAL DIABETES MELLITUS WITH DELIVERY
648.02	MATERNAL DM W/DELIVERY W/CURRENT PPC
648.03	MATERNAL DIABETES MELLITUS ANTEPARTUM
648.04	MATERNAL DM PREVIOUS POSTPARTUM CONDITION

Procedure and Revenue Code Sets

The following tables represent the applicable code sets for each procedure that is referenced by the Diabetes Mellitus rules.

PR0081 SERUM CREATININE	
CPT® Code	**Description**
80048	**Basic metabolic panel** - This panel must include the following: Calcium (82310) Carbon dioxide (82374) Chloride (82435) Creatinine (82565) Glucose (82947) Potassium (84132) Sodium (84295) Urea Nitrogen (BUN) (84520)
80050	**General health panel** This panel must include the following: Comprehensive metabolic panel (80053) Hemogram, automated, and manual differential WBC count (CBC) (85022) OR Hemogram and platelet count, automated, and automated complete differential WBC count (CBC) (85025) Thyroid stimulating hormone (TSH) (84443)
80053	**Comprehensive metabolic panel** - This panel must include the following: Albumin (82040) Bilirubin, total (82247) Calcium (82310) Carbon dioxide (bicarbonate) (82374) Chloride (82435) Creatinine (82565) Glucose (82947) Phosphatase, alkaline (84075) Potassium (84132) Protein, total (84155) Sodium (84295) Transferase, alanine amino (ALT) (SGPT) (84460) Transferase, aspartate amino (AST) (SGOT) (84450) Urea Nitrogen (BUN) (84520)
80069	**Renal function panel** - This panel must include the following: Albumin (82040) Calcium (82310) Carbon dioxide (bicarbonate) (82374) Chloride (82435) Creatinine (82565) Glucose (82947) Phosphorus inorganic (phosphate) (84100) Potassium (84132) Sodium (84295) Urea nitrogen (BUN) (84520)
82565	Creatinine; blood

PR0111 AMBULATORY VISIT CODES		
CPT Code	**Specific Encounter Type**	**General Encounter Category**
99201-99215	Office Visit	Outpatient Professional
99241-99245	Office Consult	Outpatient Professional
99271-99275	Confirmatory Consultation	Confirmatory Consultation
99341-99350	Home Visit	Outpatient Professional
99381-99397	Preventive Medicine Visit	Outpatient Professional
99401-99429	Counseling/Risk Factor Visit	Counseling/Risk Factor Visit
RV0111 AMBULATORY VISIT CODES		
Revenue Code	**Specific Encounter Type**	**General Encounter Category**
0983	Clinic Visit (Professional Component)	Outpatient Professional

PR0194 EMERGENCY DEPARTMENT VISITS (HEDIS)	
CPT Code	**Description**
99281-99285	Emergency Department Visit
RV0194 EMERGENCY DEPARTMENT VISITS (HEDIS)	
Revenue Code	**Description**
0450	Emergency Room-General
0451	Emergency Room-EMTALA Emergency Medical Screening Services
0452	Emergency Room-ER Beyond EMTALA Screening
0456	Emergency Room-Urgent Care
0459	Emergency Room-Other Emergency Room
0981	Professional Fee/Emergency Room

PR0195 NONACUTE INPATIENT VISITS (HEDIS)	
CPT Code	**Specific Encounter Type**
99301-99313	Nursing Facility Services
99315-99316	Nursing Facility Discharge Day Management
99318	Annual nursing facility assessment
99321-99328	Domiciliary, Rest Home or Custodial Care Services
99331-99337	Domiciliary, Rest Home or Custodial Care Services

RV0195 NONACUTE INPATIENT VISITS (HEDIS)	
Revenue Code	**Specific Encounter Type**
0118	Room & Board-Private-Rehabilitation
0128	Room & Board-Semiprivate Two-Bed-Rehabilitation
0138	Semiprivate-Three and Four Beds-Rehabilitation
0148	Private (Deluxe)-Rehabilitation
0158	Room & Board-Ward-Rehabilitation
0190-0199	Subacute Care
0524-0525	Free Standing Clinic
0550-0559	Skilled Nursing
0660-0669	Respite Care

PR0199 OUTPATIENT VISITS, DM (HEDIS)		
CPT Code	**Specific Encounter Type**	**General Encounter Category**
92002-92014	General Ophthalmological Services	General Ophthalmological Services
99201-99205	Office Visit, New Patient	Outpatient Professional
99211-99215	Office Visit, Established Patient	Outpatient Professional
99217-99220	Observation Care	Observation Care
99241-99245	Office Consult	Outpatient Professional
99341-99350	Home Visit	Outpatient Professional
99384-99387	Preventive Medicine Visit, New Patient	Preventive Medicine Services
99394-99397	Preventive Medicine Visit, Established Patient	Preventive Medicine Services
99401-99404	Counseling/Risk Factor Reduction Intervention	Preventive Medicine Services
99411-99412	Counseling/Risk Factor Reduction Intervention	Preventive Medicine Services
99420	Counseling/Risk Factor Reduction Intervention	Preventive Medicine Services
99429	Counseling/Risk Factor Reduction Intervention	Preventive Medicine Services
99455-99456	Work Related Or Medical Disability Evaluation Services	Work Related Or Medical Disability Evaluation Services
99499	Other Evaluation and Management Services	Special E&M Services

RV0199 OUTPATIENT VISITS, DM (HEDIS)		
Revenue Code	**Specific Encounter Type**	**General Encounter Category**
0510-0519	Clinic Visit (Facility Component)	Ancillary Services
0520-0523	Free Standing Clinic	Ancillary Services
0526-0529	Free Standing Clinic	Ancillary Services
0570-0599	Home Health	Ancillary Services
0770-0779	Preventive Care Service	Ancillary Services
0820-0859	Outpatient or home dialysis	Ancillary Services
0880-0889	Miscellaneous Dialysis	Ancillary Services
0982-0983	Professional Fees	Ancillary Services

PR0272 ACE/ARB THERAPEUTIC MONITORING TEST	
CPT Code	**Description**
4188F	Appropriate angiotensin converting enzyme (ACE)/angiotensin receptor blockers (ARB) therapeutic monitoring test ordered or performed (AM)2

PR0330 ACUTE INPATIENT VISITS, DM (HEDIS)	
CPT Code	**Description**
99221-99223	Inpatient hospital care
99231-99233	Subsequent hospital care
99238 - 99239	Discharge day management
99251-99255	Initial inpatient consultation
99261-99263	Follow-up inpatient consultation
99291	Critical care
RV0330 ACUTE INPATIENT VISITS, DM (HEDIS)	
Revenue Code	**Description**
0100-0101	Room and board – all inclusive and private
0110-0114	Room and board – private
0119	Room and board – private other
0120-0124	Room and board – semi-private
0129	Room and board – semi-private other
0130-0134	Semiprivate-three and four beds
0139	Semiprivate-three and four beds - other
0140-0144	Private
0149	Private - other
0150-0154	Room and board-ward
0159	Room and board-ward - other
0160-0169	Other room and board
0200-0229	Intensive care/coronary care
0720-0729	Labor room/delivery
0800-0804	Inpatient renal dialysis
0809	Inpatient renal dialysis-Other inpatient dialysis
0987	Professional Fees - Hospital Visit

Pharmacy Code Sets

The following tables provide the generic ingredients for drugs and other pharmaceuticals referenced in the Diabetes Mellitus rules. HCPCS codes are not used in possession ratio or equivalent dose calculations. Only pharmacy records which use National Drug Codes (NDC) to identify the specific medication are used in these calculations.

RX-3: ACE-INHIBITOR-CONTAINING MEDICATION

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Benazepril HCl			
CPT	0008F	ACE INHIBITOR THERAPY PRESCRIBED			
NDC		Captopril			
NDC		Enalapril Maleate			
NDC		Enalaprilat Dihydrate			
NDC		Fosinopril Sodium			
NDC		Lisinopril			
NDC		Moexipril HCl			
NDC		Quinapril HCl			
NDC		Ramipril			
NDC		Trandolapril			
NDC		Perindopril Erbumine			
NDC		Benazepril HCl / Hydrochlorothiazide			
NDC		Enalapril Maleate / Hydrochlorothiazide			
NDC		Captopril / Hydrochlorothiazide			
NDC		Moexipril HCl / Hydrochlorothiazide			
NDC		Lisinopril / Hydrochlorothiazide			
NDC		Quinapril HCl / Hydrochlorothiazide			
NDC		Fosinopril Sodium / Hydrochlorothiazide			
NDC		Amlodipine Besylate / Benazepril			
NDC		Trandolapril / Verapamil HCl			
NDC		Enalapril Maleate/ Diltiazem Maleate			
NDC		Enalapril Maleate / Felodipine			

RX-11: ANGIOTENSIN II RECEPTOR ANTAGONIST-CONTAINING MEDICATION

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Losartan Potassium			
NDC		Valsartan			
NDC		Irbesartan			
NDC		Eprosartan Mesylate			
NDC		Telmisartan			
NDC		Candesartan Cilexetil			
NDC		Olmesartan Medoxomil			
NDC		Losartan Potassium / Hydrochlorothiazide			
NDC		Valsartan / Hydrochlorothiazide			
NDC		Irbesartan / Hydrochlorothiazide			
NDC		Candesartan Cilexetil / Hydrochlorothiazide			
NDC		Telmisartan / Hydrochlorothiazide			
NDC		Eprosartan Mesylate / Hydrochlorothiazide			
NDC		Olmesartan Medoxomil / Hydrochlorothiazide			
NDC		Valsartan / Amlodipine			

RX-59: INSULIN

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Insulin regular			
CPT	J1815	INJECTION INSULIN PER 5 UNITS			
CPT	J1817	INSULIN ADMINISTRATION THROUGH DME PER 50 UNITS			
CPT	J1820	INJ INSULIN TO 100 UNITS			
CPT	S5550	INSULIN RAPID ONSET; 5 UNITS			
NDC		Isophane insulin suspension, NPH			
CPT	S5552	INSULIN INTERMEDIATE ACTING; 5 UNITS			
NDC		Isophane insulin suspension, NPH 70% & R 30%			
NDC		Isophane insulin suspension, NPH 50% & R 50%			
NDC		Insulin zinc suspension semilente, prompt			
NDC		Insulin zinc suspension lente			
NDC		Insulin zinc suspension ultralente, extended			
NDC		Protamine zinc insulin suspension (PZI)			
NDC		Insulin lispro [rDNA origin]			
CPT	K0548	INJECTION INSULIN LISPRO UP TO 50 UNITS			
CPT	S5551	INSULIN MOST RAPID ONSET; 5 UNITS			
NDC		Insulin concentrated regular			
NDC		Insulin [human] regular, buffered			
NDC		Insulin lispro protamine suspension & insulin lispro [rDNA origin]			
NDC		Insulin glargine [rDNA origin]			
CPT	S5553	INSULIN LONG ACTING; 5 UNITS			
NDC		Insulin aspart [rDNA origin]			
NDC		Insulin aspart & insulin aspart protamine [rDNA origin]			
NDC		Insulin glulisine [rDNA origin]			
NDC		Insulin detemir			
NDC		Insulin human [rDNA origin], inhalation powder			

RX-175: GLUCOMETERS

Code Type	Proc Code	Code Description	Route of Admin	Dosage Form	Dosage Strength
NDC		Glucometers			
HCPCS	A9275	Home glucose disposable monitor, includes test strips			
HCPCS	E0607	HOME BLOOD GLUCOSE MONITOR			
HCPCS	E2100	BLD GLU MONITOR W/INTEGRATED VOICE SYNTHESIZER			
HCPCS	E2101	BLD GLU MONITOR W/INTEGRATED LANCING/BLD SAMPLE			

RX-176: BLOOD GLUCOSE TEST STRIPS					
Code Type	**Proc Code**	**Code Description**	**Route of Admin**	**Dosage Form**	**Dosage Strength**
NDC		Blood Glucose Test Strips			
HCPCS	A4772	BLOOD GLUCOSE TEST STRIPS FOR DIALYSIS PER 50			

RX-182: BIGUANIDE-CONTAINING MEDICATION					
Code Type	**Proc Code**	**Code Description**	**Route of Admin**	**Dosage Form**	**Dosage Strength**
NDC		Metformin HCl			
NDC		Glyburide / Metformin			
NDC		Rosiglitazone Maleate / Metformin HCl			
NDC		Glipizide / Metformin HCl			
NDC		Pioglitazone HCl / Metformin			
NDC		Sitagliptin / Metformin HCl			

The NDC codes that are included in the pharmacy code set RX0221 – Insulin or oral hypoglycemics/antihyperglycemics (HEDIS) can be found in the accompanying document, NDC Code Tables.

Glossary

<table>
<tr><th>Term</th><th>Definition</th></tr>
<tr><td>℞</td><td>The presence of ℞ in the Report Rule ID column indicates that the rule candidate is exclusively or primarily dependent on pharmacy claims information. Members who do not have a managed pharmacy benefit, as determined from the Member Term input data file, will be assigned a default value of ‘N’ for these rule candidates, thus eliminating unnecessary processing time.</td></tr>
<tr><td>Result Flag ‘Y’</td><td>A Result Flag of ‘Y’ is assigned to indicate that the result of the rule is affirmative; the treatment was provided, the diagnostic test was performed, the lab value was normal, etc. If a rule has an affirmative result, the result flag of Y will be assigned regardless of the patient’s length of eligibility.</td></tr>
<tr><td>Result Flag ‘N’</td><td>A Result Flag of ‘N’ is assigned to indicate that the result of the rule is negative AND the patient met the minimum eligibility requirements for that particular rule. For example, if the rule is looking for a drug within the last 120 days, the patient must be enrolled in a drug benefit for at least the last 120 days.</td></tr>
<tr><td>Result Flag ‘Q’</td><td>A Result Flag of ‘Q’ is assigned to indicate that there was no claim record indicating that the patient received a particular test or treatment, but there may be data incompleteness due to lack of continuous enrollment. If a patient is not continuously enrolled in medical or pharmacy benefits throughout the window of time during which the service was being evaluated, there is no way to know whether the test was performed or not. The absence of a claim record for the test might be due to data incompleteness prior to the onset of medical benefits, or it might reflect the fact that the patient did not actually receive the test.</td></tr>
<tr><td>Result Flag ‘NA’</td><td>A Result Flag of ‘NA’ is assigned to indicate that the member has clinical characteristics or contraindications that render a particular rule “not applicable” to that particular member. There are seven (7) breakdowns of the NA result flag, which provide a method for further identification and clarification of this flag:
<table>
<tr><th>FLAG</th><th>DESCRIPTION</th></tr>
<tr><td>NA1</td><td>Patient did not meet the age or gender criteria.</td></tr>
<tr><td>NA2</td><td>Patient was not currently taking the medication in question or had not taken it for the required duration.</td></tr>
<tr><td>NA3</td><td>Patient was taking the medication, but a possession ratio could not be computed [less than two prescriptions during the rule time window].</td></tr>
<tr><td>NA4</td><td>Patient did not meet the rule specific criteria [e.g., co-morbidity, complexity (diagnosis and medication), intervention not warranted].</td></tr>
<tr><td>NA5</td><td>No lab result record or insufficient information.</td></tr>
<tr><td>NA6</td><td>Patient admitted to long term care facility or hospital which might cause data incompleteness.</td></tr>
<tr><td>NA7</td><td>Patient who did not receive treatment or medication had a contraindication or other justification.</td></tr>
</table></td></tr>
<tr><td>Result Flag ‘NRX’</td><td>A Result Flag of ‘NRX’ is assigned under the following circumstances to the rule types noted below: 1) the member did not have a pharmacy benefit at the end of the report period (applies to chronic and some preventive cases (case ID = 1xxxxx or 3xxxxx)) or 2) the member did not have a pharmacy benefit throughout the duration of episodic condition (case ID = 2xxxxx).
▪ Research Based rules (R-1, R-2)
▪ Medication Adherence rules (A)
▪ Patient Safety rules (S-M, S-DI)
These rule types are exclusively or primarily dependent on pharmacy claims. For Care Pattern rules (CP-I, CP-R, CP-E), a Q flag will be assigned if the patient does not meet the minimum pharmacy eligibility requirements for the particular rule. In addition to the above, some national standard rules may also have NRX flags assigned if the member did not have pharmacy benefit at the end of the report period.</td></tr>
<tr><td>MCE</td><td>In order to assign a Result Flag of 'Q', each rule has a specific Minimum Continuous Enrollment (MCE) period for medical and pharmacy benefits which reflects the time frame of the recommended services (e.g., if the rule is looking for a test within 12 months the medical MCE is 12 months). When a test or treatment is absent, the MCE is used to determine whether to assign a result flag of ‘N’ or ‘Q’. A Result Flag of ‘N’ is assigned when the patient meets the MCE requirements. A Result Flag of ‘Q’ is assigned when the patient does not meet the MCE requirements.</td></tr>
</table>

INGENIX®

Quality Processes

10/27/08

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Table of Contents

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Section 1 - Overview

1.1 Purpose of Document

This document describes the quality processes from clinical measure creation to final product delivery. These processes ensure that the information provided to our clients has maximum quality and integrity.

1.2 Overview

Evidence-based treatment guidelines have been developed with the belief that adherence to them lowers costs, increases quality of care, or both. Health service organizations, payers, and employers want to provide the best care at the best cost. By integrating clinically relevant research evidence with actual care patterns, as evidenced through claims and other administrative data, gaps in care can be identified and interventions can be targeted to improve outcomes (cost and quality).

Measures are created through a well-defined process involving careful review at every step. Quality checks are performed in five different phases of development:

1. Clinical Measure Creation
2. Conversion of Clinical Measures to Machine Code
3. Clinical Measures Processing Engine (i.e., component-ware)
4. End to End Testing (Customer Acceptance Testing)
5. Validation of Results

1.3 Testing Through Multiple Methods

Quality assurance of each measure is accomplished through the testing using multiple methods. Types of testing, data samples and volume vary to ensure the integrity of the measure. Rigorous development, analysis and testing processes are deployed for creating of the measure specifications. Software testing ensures the software is working as designed. Reliability and validity testing of measures is based on differing data samples and volume of members. National benchmarks are created on a large volume set of data representing members throughout the United States. All quality checks for all measure results must have consistent results and meet expected outcomes based on industry knowledge and experience.

Section 2 - Quality Processes

2.1 Creation of Clinical Measures

2.1.1 Literature Review

The process of measure creation begins with the clinician, who reviews published literature on evidence-based medicine. Various resources are examined, including but not limited to:

- MEDLINE
- Professional and specialty organization (e.g. ADA, ACC/AHA) guidelines
- Agency for Healthcare Research and Quality (AHRQ) including national clearinghouse guidelines
- National standards (e.g. HEDIS, AMA PCPI, AQA, NQF)
- Institute for Clinical Systems Improvement (ICSI)
- Food and Drug Administration (FDA) Advisories
- Published clinical trials and other relevant articles

- Pharmaceutical manufacturer's recommendations

Based upon the supporting literature and the ability to adequately define and measure care using electronic claims data, proposed new measures are developed. Note: this same process is employed when deciding whether to update or retire an existing measure.

2.1.2 Expert Panel Review

The proposed measures and current treatment guidelines are then reviewed by the Clinical Consultant Panel. This expert panel plays a critical role in the creation and maintenance of measures. The panel is currently comprised of 21 clinicians, including 18 physicians and 3 Pharmacologists. Each physician is board certified in their area of specialty and has more than 15 years of clinical practice.

The specialties / sub-specialties represented on the panel are:

Specialty	
Cardiology (2)	Oncology
Endocrinology	Ophthalmology
Family Practice	Orthopedics
Gastrointestinal	Otolaryngology
Geriatrics	Pediatrics
Hematology	Psychiatry (2)
Infectious Disease	Pulmonary
Internal Medicine	Rad Oncology
Nephrology	Rheumatology
Neurology (4)	Surgery
OB/GYN	

The physicians on the panel are practicing physicians in settings such as a university hospital, VA hospital, medical center, clinic, independent or group practice. The Pharmacologists have more than 10 years of clinical practice. All clinicians, with the exception of the Medical Director, have no affiliation with UnitedHealth Group outside of their responsibilities on the Clinical Consultant Panel. An annual training session is held for all panel members to provide updates on future product enhancements.

2.1.3 Summary of Evidence Basis

When the expert panel has reached consensus on the proposed measures, a synopsis of the evidence basis for each measure is developed. This synopsis includes citations for published research and guidelines that support the measure, as well as strength of evidence ratings when these rankings are available.

2.1.4 Clinical Algorithms

In conjunction with the synopsis a clinical algorithm is developed which indicates how to define and evaluate the clinical measures. This document includes condition confirmation criteria, exclusion rules, intervention rules, and compliance criteria, as well as high-level details of diagnostic, procedural, revenue, pharmaceutical, and laboratory code sets. These code sets are defined and maintained in a secure product database.

2.1.5 Maintenance Review Cycle

Existing measures are reviewed every 12-24 months as part of an ongoing product maintenance cycle. Any member of the expert panel may suggest changes to a measure at any point, even outside of the regular review cycle, if new evidence is published which relates to the measure.

2.2 Conversion of Clinical Measures into Software Code

The clinical algorithms are converted into software code. A team of business analysts, nurses, and health services researchers translates the words from the clinical algorithm into machine readable language. The team members independently peer review and sign off on each measure to ensure that the software code accurately reflects the original measure specifications.

2.3 Testing of Engine Software Code

The software code from is processed to produce compliance results. Per the product development life cycle there are multiple types of testing activities associated with this component-ware engine. Security requirements, performance requirements, legal requirements (e.g. HIPAA), content requirements, and usability are all tested and verified.

2.3.1 Unit and Integration Testing

During unit and integration testing each engine component is tested discretely by the developer or software engineer who programmed it. In unit testing the developer tests functional features, environmental requirements, system behavior and performance aspects. When the software moves into integration testing, the developer performs positive and negative testing of system interfaces to verify that the functions which were tested at the unit level perform correctly in a full system build and deployment.

2.3.2 Functional Testing

Functional testing is conducted at the end of each software iteration to test the alignment of the product to the functional requirements. The QA team performs positive and negative testing of product requirements and architecture. At the end of functional testing, the decision is made either to move on to the next iteration or to move the software into system testing.

2.3.3 System Testing

There are three types of system testing initiatives which are conducted using sample data to simulate business processes. The table below describes the purpose of each type of system test.

Test Type	Description
Volume testing	Determine whether the engine can handle the required volume of data
Performance testing	Determine whether the engine meets its performance requirements
Platform testing	Ensure that the component-ware works appropriately for all supported operating systems

2.4 Reliability Testing

Customer Acceptance Testing (CAT) is another important quality process. CAT ensures that the clinical measures are functioning as intended and that they generate accurate results for typical billing patterns. Using actual claims data a team of business analysts, nurses, and health services researchers conducts a detailed analysis of the output. For each clinical condition in the product (e.g., Diabetes Mellitus, Coronary Artery Disease, etc.) there is a set of CAT data with at least 4000 members who satisfy the condition confirmation criteria. This data is extracted from a large (50+ million member) multi-payer benchmark database and contains inpatient, outpatient, pharmacy, and laboratory data. The testing team rigorously checks the creation of denominators (target population), numerators, and exclusions from both.

Regression testing is the part of CAT that verifies the reliability of the product across software releases. For a new release the testing team confirms that every unchanged measure produces the same results as in previous releases, accounting for systematic changes to the software (e.g., code updates, logic changes, etc). Regression testing is conducted at multiple points throughout the software development cycle.

2.5 Validity Testing

Face Validity Testing (FVT) is the final testing step in the software release cycle. One million members are randomly selected from the large multi-payer benchmark database and their claims data is processed through the software. The Medical Director reviews the results to verify that:

- Prevalence rates for a condition are comparable to nationally published rates
- Compliance rates for a measure are comparable to the rates reported in the published literature or by other national sources (e.g. HEDIS). If no comparable sources are available, the rates are judged to be clinically reasonable by practicing physicians and health services researchers
- There are no significant, unexplained variations when looking at results from different health plans and different geographic areas

2.6 Creation of National Benchmarks

National benchmarks are on a population no less than 12 million members. Prevalence is calculated doe each condition. Compliance rates are calculated for each measure.
The Medical Director reviews the results to verify that:

- Prevalence rates for a condition are comparable to nationally published rates
- Compliance rates for a measure are comparable to the rates reported in the published literature or by other national sources (e.g. HEDIS). If no comparable sources are available, the rates are judged to be clinically reasonable by practicing physicians and health services researchers
- There are no significant, unexplained variations when looking at results from different health plans and different geographic areas

Section 3 - Summary

Ensuring quality in the product requires expertise from a variety of disciplines across each step in the development process. These efforts, which are designed to minimize the risk of producing inaccurate results, are particularly important for an application which assesses clinical care and identifies gaps in care. Errors cannot be completely eliminated due to the inherent limitations of administrative and claims data (e.g., incomplete data due to coverage and benefit limitations, coordination across multiple insurers, or complimentary care). None-the-less, administrative and claims data offer a cost effective means of identifying gaps in care, so that limited resources can be directed to the areas most likely to generate a return on investment, either through improved outcomes, reduced costs, or both.

INGENIX®

Input Guide

Release 7.0, Technical Guide for Windows, February 2008

Ingenix
950 Winter Street, Suite 3800
Waltham, MA 02451
Customer Support:
Tel: 866.818.7424
Fax: 781.895.9951
SymmetrySuite.Support@ingenix.com

What Input Files to Prepare

The following list specifies what input files you prepare for processing:

- The claims data file (required)
- The member data file (required)
- The member term data file (required)

Field Type Definitions and Input File Requirements

This chapter lists the field requirements for your input files. One of the attributes listed among the requirements is defined as "Type". There are four field types used to describe a field's value, and they are defined below.

Field Type	Definition
AlphaNum	A value made of letters and/or numbers. If a value of this type is made of numbers only, it will not be a value that can be operated on mathematically. For example, it would be inappropriate to subtract one procedure code from another procedure code even though both values may contain only numbers.
Num	A value made of numbers only, and which can logically be operated on mathematically. Age is an example of this type. One particular field, while not used in mathematical calculations, is defined in the EBM Connect software as such that it accepts only numeric values. (To enter a non-numeric value would cause EBM Connect processing to stop.) Therefore, this field is defined as Num. It is the Case ID field in the optional disease registry input file.
Date	A value which can be interpreted as a date value. Values should always use four-digit years but the format may vary otherwise.
DecNum	A value made of numbers and a decimal point. These values can also logically be operated on mathematically.

Claims Input File

The claims file contains detailed information on services that were billed or performed or otherwise rendered. The claims file includes:

- Medical claims, including medical services, facility services and clinic services
- Pharmacy claims, including billed prescriptions and drugs
- Lab claims, including lab test and results information

Field Name	Type	Length	Required or Optional
Family ID	AlphaNum	1-30	Always required for all claims
Patient ID	AlphaNum	0-2	Optional
Amount Paid	DecNum	1-11	Required for all claims
Amount Allowed	DecNum	0-11	Required for all claims
Procedure Code	AlphaNum	5	Required if there is no revenue code, NDC, or LOINC® code
Procedure Code Modifier	AlphaNum	2	Required for medical claims
Revenue Code	AlphaNum	0 or 4	Optional (applies to medical claims when used)
First Diagnosis Code	AlphaNum	5 or 6	Required for medical claims
Second Diagnosis Code	AlphaNum	0, 5 or 6	Optional (applies to medical claims when used)
Third Diagnosis Code	AlphaNum	0, 5 or 6	Optional (applies to medical claims when used)
Fourth Diagnosis Code	AlphaNum	0, 5 or 6	Optional (applies to medical claims when used)
First Date of Service	Date	8 or 10	Always required for all claims
Last Date of Service	Date	8 or 10	Required for all claims

Paid Date	Date	0, 8 or 10	Optional
Type of Service	AlphaNum	0-10	Optional
Provider ID	AlphaNum	1-20	Required for medical claims
Ordering Provider ID	AlphaNum	0-20	Optional
Provider Type	AlphaNum	1-10	Required for medical claims
Provider Specialty Type	AlphaNum	1-10	Required for medical claims
Provider Key	AlphaNum	1-20	Required for medical claims
NDC	AlphaNum	0 or 11	Required for Rx claims
Day Supply	Num	0-4	Required for Rx claims
Quantity Count	DecNum	0-10	Required for Rx claims
LOINC®	AlphaNum	0 or 7	Required for lab claims
Lab Test Result	AlphaNum	0-18	Required for lab claims
Place of Service	AlphaNum	1-10	Required for medical claims
Unique Record ID	AlphaNum	1-28	Required for all claims
Claim Number	AlphaNum	1-28	Required for all claims
Bill Type Frequency Indicator	Num	0 or 1	Optional
Patient Status	AlphaNum	1-2	Required for facility claims (involving admission or confinement).
Facility Type	AlphaNum	0-2	Optional
Bed Type	AlphaNum	0-1	Optional
First ICD-9 Procedure Code	AlphaNum	0, 4 or 5	Optional, but will impact results (applies to medical claims when used)
Second ICD-9 Procedure Code	AlphaNum	0, 4 or 5	Optional (see above)
Third ICD-9 Procedure Code	AlphaNum	0, 4 or 5	Optional (see above)
Fourth ICD-9 Procedure Code	AlphaNum	0, 4 or 5	Optional (see above)

Field Descriptions

Instructions for each input field are as follows:

Family ID

This field identifies all members of a family and can be any alphanumeric string.

Note: Remember that each Family ID (and Patient ID) listed in your claims input file must have a corresponding record in your member input data file and your member term data file.

Patient ID

This field identifies individual members within a family. If present, this field must be sorted within Family ID, so that all records for an individual are contiguous. If the Family ID uniquely identifies an individual, this field need not be specified (that is, its length in the dictionary will be zero).

Amount Paid

The amount paid for this claim line.

Amount Allowed

The allowed amount for this claim line. This amount typically represents the total amount reimbursed including deductibles, copays, coinsurance, insurer paid, etc.

Procedure Code

The procedure code must be one of:

- A procedure code specified in the Physician's Current Procedure Terminology, 4th Edition (CPT®-4 codes) defined by the American Medical Association, for the years 1997 and later.
- A procedure code specified by the HCFA Common Procedure Coding System, Level II code (HCPCS) defined by the Centers for Medicare and Medicaid Services (CMS) for the years 1999 and later.
- A National Uniform Billing Committee (NUBC) revenue code.

Note: When the NUBC code is entered in the Procedure Code field, it should be padded to the right with blanks because the Procedure Code field always occupies five characters.

- If your organization defines its own procedure codes and/or revenue codes, they must be mapped to standard procedure and revenue codes.

Procedure Code Modifier

Use this field to specify any procedure code modifier that accompanies the procedure code.

Revenue Code

The revenue code, if one was entered for the claim. Supported values in this field are NUBC revenue codes. If your organization defines its own revenue codes, they must be mapped to standard revenue codes.

The revenue code is an optional field, allowing you to define your input records so that you can place an NUBC revenue code and a CPT/HCPCS procedure code on a single record line.

For claim records that do not have a revenue code, leave the revenue code field blank.

First Diagnosis Code Through Fourth Diagnosis Code

Up to four diagnoses may be entered for each claim, but only the first is required.

If your organization defines its own diagnosis codes, they must be mapped to standard ICD-9 diagnosis codes.

First Date of Service and Last Date of Service

The first date and last date represented by the claim line. If you choose to use a date format with separators (such as YYYY/MM/DD or YYYY-MM-DD), the separators are ignored on input, so you can use any character as a separator. Valid formats include: YYYYMMDD, MMDDYYYY, DDMMYYYY, YYYY/MM/DD, MM/DD/ YYYY, and DD/MM/YYYY, where the separator can be any character.

Paid Date

This field is optional. This is the date the claim was paid. The format of the paid date must be the same as that used in the First and Last Date of Service.

Type of Service

This is an optional code which represents the type of service (TOS) performed for this claim. If no specific value is available for this field, it should be filled with blanks. If this field is not used (i.e., its length is set to zero in the configuration), non-pharmaceutical claims with no procedure code will be treated as ancillary records.

Provider ID

Provider identification number from the claim. Used to identify who performed the service.

Ordering Provider ID

This is an optional field. This is the identification number of the provider who ordered the service.

Provider Type

This code represents the type of provider who performed the service. Examples of provider types would be chiropractor, nurse practitioner, medical doctor, counselor, pharmacy, hospital or treatment facility.

Provider Specialty Type

This code represents the specialty of the provider who performed the service.

Provider Key

Unique number or code for a physician who has multiple provider IDs or specialties. A single health care provider may have multiple provider IDs in your input claims data, but this person or entity should have only one provider key.

NDC

If this is a pharmaceutical claim, this field should contain the drug's NDC code. For non-pharmaceutical claim records, the NDC field should be filled with blanks.

Day Supply

For pharmacy records, the number of days a filled prescription is expected to last. If you have no pharmacy records, the Days Supply is an optional field.

Quantity Count

Quantity of drug dispensed in metric units:

Each - solid oral dosage forms (tablet, capsule), powder filled (dry) vials, packets, patches, units of use packages, suppositories, bars.

Milliliter - (cc) liquid oral dosage forms, liquid filled vials, ampules, reconstituted oral products.

Grams - ointments, bulk powders (not IV).
If you have no pharmacy records, the Quantity Count is an optional field.

LOINC®

Logical Observation Identifiers Names and Codes (LOINC®). The LOINC Code is a universal identifier for a lab test for a particular analyte. The LOINC User's Guide and database can be found at www.regenstrief.org.

Enter a LOINC code if the record is a lab record. For non-lab records, leave the LOINC field blank.

If you have no lab records in your claims input, the LOINC code is optional.

Notes:

(1) When using lab results data that has not been mapped to a LOINC code, map the comparable vendor-specific test number provided by the laboratory vendor(s) to one of these default codes.

(2) This is a retired code which may be present on historical data, or which some laboratories may be continuing to use. Input record data with this code is included in the definition of this test.

Lab Test Result

If the record is a lab record, use this field to enter the result value of lab test. For non-lab records, this field should be blank.

If you have no lab records in your claims input, the Lab Test Result is optional.

Place of Service

Place of service (POS). You must map your internal POS codes to Centers for Medicare and Medicaid Services (CMS) standard POS codes.

Unique Record ID

This required field contains a unique identifier representing the service line from the claim. For medical services, this ID typically represents the service row from the CMS 1500 or CMS 1450/UB92 claim form.

Claim Number

A unique identifier used to link service lines for a specific claim submitted for a member. If a claim has multiple service lines, each service will have a unique record ID and the same claim number to represent the claim.

Bill Type Frequency Indicator

This optional field is used to indicate the disposition of confinements.

Patient Status

This field is required for facility claims. The contents will be the patient status indicator field from the NUBC UB-92 form. This field can denote whether the member died during a confinement.

Facility Type

This field is optional. Space for it is provided to allow for additional post grouping analysis. The contents will typically be the UB-92 facility type data value. This would allow records to be easily selected for diagnosis related grouping (DRG) based on the facility type.

Bed Type

If a value is present, this field acts as an additional discriminator in determining whether a Facility record extends an existing confinement or starts a new confinement.

First ICD-9 Procedure Code Through Fourth ICD-9 Procedure Code

If your claims have ICD-9 procedure codes, include them in your claims input file.

If a decimal point will appear in this field in your claim records, the length should be given as 5. If the decimal separator is not used, the length is 4. If these fields are unused, the length is zero.

Member Input File

The member data file contains the most current information about the member.

Field Descriptions

Field	Type	Length	Required or Optional
Family ID	AlphaNum	1-30	Required
Patient ID	AlphaNum	0-2	Optional
Patient Gender	AlphaNum	1	Required
Date of Birth	Date	8 or 10	Required
Member Beginning Eligibility Date	Date	0, 8 or 10	Optional
Member Ending Eligibility Date	Date	0, 8 or 10	Optional

Instructions for each input field are as follows:

Family ID

This field identifies all members of a family and can be any alphanumeric string. The records in the member file must be sorted first on the Family ID (together with Patient ID, if available) so that all records for an individual are contiguous.

Patient ID

This field identifies individual members within a family. If present, this field must be sorted within Family ID, so that all records for an individual are contiguous. If the Family ID uniquely identifies an individual, this field need not be specified (that is, its length in the dictionary will be zero).

Patient Gender and Date of Birth

The member's gender (F or M) and date of birth. If you choose to use a date format with separators (such as YYYY/MM/DD or YYYY-MM-DD), the separators are ignored on input, so you can use any character as a separator. Valid date formats include: YYYYMMDD, MMDDYYYY, DDMMYYYY, YYYY/MM/DD, MM/DD/YYYY, and DD/MM/YYYY, where the separator can be any character.

Member Beginning Eligibility Date and Ending Eligibility Date

The first date on which the member became covered under the plan and the last date of the member's coverage. If you choose to use a date format with separators (such as YYYY/MM/DD or YYYY-MM-DD), the separators are ignored on input, so you can use any character as a separator. Valid formats include: YYYYMMDD, MMDDYYYY, DDMMYYYY, YYYY/MM/DD, MM/DD/YYYY, and DD/MM/YYYY, where the separator can be any character.

Member Term Input File

The member term data file contains member coverage and term activity information. Plan coverage begin and end dates are required in order to correctly calculate the other fields in the member term file. There may be more than one record per individual member.

Field Descriptions

Field	Type	Length	Required or Optional
Family ID	AlphaNum	1-30	Required
Patient ID	AlphaNum	0-2	Optional
Member Beginning Eligibility Date	Date	8 or 10	Required
Member Ending Eligibility Date	Date	8 or 10	Required
Primary Care Provider	AlphaNum	20	Required
Provider Specialty Type	AlphaNum	1-10	Required
Medical Flag	AlphaNum	1	Required
Pharmacy Flag	AlphaNum	1	Required

Instructions for each input field are as follows:

Family ID

This field identifies all members of a family and can be any alphanumeric string. The records in the member term file must be sorted first on the Family ID (together with Patient ID, if available) so that all records for an individual are contiguous.

Patient ID

This field identifies individual members within a family.

Member Beginning Eligibility Date and Member Ending Eligibility Date

The first date on which the member became covered under the plan and the last date of the member's coverage. If you choose to use a date format with separators (such as YYYY/MM/DD or YYYY-MM-DD), the separators are ignored on input, so you can use any character as a separator. Valid formats include: YYYYMMDD, MMDDYYYY, DDMMYYYY, YYYY/MM/DD, MM/DD/YYYY, and DD/MM/YYYY, where the separator can be any character.

Primary Care Provider

The provider key for the member's primary care physician. A single health care physician may have multiple provider IDs in your input claims data, but this person should have only one provider key.

Provider Specialty Type

This code represents the specialty of the primary care physician.

Medical Flag

Identifies whether the member has medical coverage (Y or N).

Pharmacy Flag

Identifies whether the member has pharmacy coverage (Y or N).

INGENIX

2007 Benchmarks

									Result Flag Distribution				
Report Case ID	Case Description	Summary Rule ID	Rule Cat. Desc.	Rule Type	Rule Description	Compliance Rate	Non-Compliance Rate	Yes Rate	Y	N	Q	NRX	NA (total)
0	Global Rules	9179002	Global Encounter	CP-C	Patient(s) currently taking a COX-2 inhibitor without a documented indication.	46	54	54	54	46	0	0	0
0	Global Rules	9180015	Global Drug Monitoring	S-M	Adult patient(s) taking warfarin that had three or more prothrombin time tests in last 6 reported months.	69	31	69	69	31	0	0	0
0	Global Rules	9180016	Global Drug Monitoring	S-M	Adult patient(s) taking a statin-containing medication nicotinic acid or fibric acid derivative that had an annual serum ALT	81	19	81	81	19	0	0	0
100311	Diabetes	9000023	Patient Safety	S-M	Patient(s) taking a biguanide (e.g. metformin) ACE-inhibitor or angiotensin II receptor antagonist that had a serum	80	20	80	50	12	0	0	38
100311	Diabetes	9000027	Care Pattern	CP-I	Patient(s) that had an office visit for diabetes care in last 6 reported months.	78	22	78	78	22	0	0	0
100311	Diabetes	9000043	Disease Management	R-2	Adult(s) that had a serum creatinine in last 12 reported months.	76	24	76	75	24	0	0	2
100404	Asthma	9000007	Care Pattern	CP-I	Patient(s) that had an office visit for asthma care in last 6 reported months.	58	42	58	58	42	0	0	0
102500	HTN	9000011	Care Pattern	CP-I	Patient(s) that had an annual physician	82	18	82	82	18	0	0	0
102500	HTN	9000012	Care Pattern	CP-I	Patient(s) that had a serum creatinine in last 12 reported months.	68	32	68	68	32	0	0	0
103300	COPD	9000003	Care Pattern	CP-I	Patient(s) that had an annual physician	81	19	81	81	19	0	0	0
103300	COPD	9000006	Disease Management	R-1	Patient(s) with frequent short-acting inhaled bronchodilator use who are also using a long-acting inhaled bronchodilator.	64	36	64	2	1	0	0	97
103500	Hyperlipidemia	9000006	Care Pattern	CP-I	Patient(s) with a LDL cholesterol test in last 12 reported months.	80	20	80	80	20	0	0	0
103500	Hyperlipidemia	9000012	Care Pattern	CP-I	Patient(s) with a HDL cholesterol test in last 12 reported months.	80	20	80	80	20	0	0	0
103500	Hyperlipidemia	9000014	Care Pattern	CP-I	Patient(s) with a triglyceride test in last 12 reported months.	80	20	80	80	20	0	0	0
104000	Migraine	9000006	Care Pattern	CP-I	Adult patient(s) with frequent use of acute medications that also received prophylactic medications.	62	38	62	2	1	0	0	96
104200	CKD	9000027	Disease Management	R-1	Patient(s) with proteinuria currently taking an ACE-inhibitor or angiotensin II receptor	69	31	69	19	9	0	0	72
104700	Prostate CA - I	9000006	Care Pattern	CP-I	Patient(s) that had a prostate specific antigen test in last 12 reported months.	80	20	80	80	20	0	0	0

INGENIX

2007 Benchmarks

									Result Flag Distribution				
Report Case ID	Case Description	Summary Rule ID	Rule Cat. Desc.	Rule Type	Rule Description	Compliance Rate	Non-Compliance Rate	Yes Rate	Y	N	Q	NRX	NA (total)
104700	Prostate CA -	9000007	Care Pattern	CP-I	Patient(s) that had an annual physician	87	13	87	87	13	0	0	0
201200	Sinusitis Acute	9000002	Care Pattern	CP-I	Patient(s) treated with an antibiotic for acute sinusitis that received a first line	62	38	62	31	19	0	0	50
201500	Pregnancy Management	9000001	Care Pattern	CP-N	Pregnant women that had HIV testing.	66	34	66	66	34	0	0	0
201500	Pregnancy Management	9000003	Care Pattern	CP-I	Pregnant women less than 25 years of age that had chlamydia screening.	67	33	67	8	4	0	0	88
201500	Pregnancy Management	9000005	Care Pattern	CP-N	Pregnant women that had ABO and Rh blood type testing.	82	18	82	82	18	0	0	0
201500	Pregnancy Management	9000006	Care Pattern	CP-I	Pregnant women that had syphilis screening.	84	16	84	84	16	0	0	0
201500	Pregnancy Management	9000007	Care Pattern	CP-I	Pregnant women that had urine culture.	59	41	59	59	41	0	0	0
201500	Pregnancy Management	9000008	Care Pattern	CP-I	Pregnant women that had HBsAg testing.	83	17	83	83	17	0	0	0
201500	Pregnancy Management	9000009	Disease Management	R-2	Pregnant women that received Group B Streptococcus testing.	71	29	71	69	28	0	0	4

INGENIX

Overview of Facility Event Methodology

A Facility Event is a unique collection of services performed for a particular member by one to many providers, representing an admission, emergency department visit, or outpatient surgery. There are four types of Facility Events:

1. Confinement/Admission (FIP)
2. Outpatient Surgery (FOS)
3. Emergency Room (FER)
4. Other (OTH)

Each Facility Event Type has a unique set of rules to identify claim detail records as trigger records. A trigger record is a record that meets the criteria for the basis of an event. A trigger record, in turn, serves as a sort of "magnet" for associating additional related claim detail records.

Claim data elements required to trigger specific event types and service date time period:

1. Confinement/Admission (FIP)
   - A confinement record (created by the Confinement/Admission methodology described below) with a revenue code representing inpatient accommodation room and board (revenue code of 0100-0219) triggers a Confinement/Admission (FIP) Event Type.
     - Confinement/Admission Methodology:
       - Confinement/Admission definition: Confinement/Admission represents a member's uninterrupted stay for a defined period of time in a hospital, skilled nursing facility, or other approved health care facility or program, followed by discharge from that same facility or program.
       - A confinement is assigned to a set of one or more medical claim records on which there is:
         1. The same unique patient ID
         2. The same unique provider ID
         3. An inpatient accommodation room and board revenue code of 0100-0219
         4. No gap in dates of service
       - The beginning and the ending dates of the confinement period are identified using the **From** and **Through** dates from the facility claim.
       - In order for multiple inpatient accommodation room and board records to be regarded as one confinement, the following condition must be met:
         - The difference between the **Through date** of the first accommodation room and board revenue code record and the **From date** of the next accommodation room and board revenue code record must be less than or equal to 1 day. The beginning of the confinement represents the earliest **From date** and the ending of the confinement represents the latest **Through date**. If a record has overlapping dates, the record will be included in the confinement for which the record's **From date** and **Through date** are between the dates of the confinement inclusive. If the difference between the **Through date** and the **From date** is > 1, then the next record represents a new confinement.

   - The timeframe for claims included in a Confinement/Admission Facility Event is one day prior to the Confinement admission date through the discharge date of the confinement.

2. Outpatient Surgery (FOS)
   - A claim record based on a CMS Place of Service code representing an outpatient acute care facility or office/clinic, and a Procedure Code Service Type of Surgical Procedures or a Revenue Code representing operating room or ambulatory surgery services triggers an Outpatient Surgery Event.
     - A POS code of 05, 06, 07, 08, 22, or 24 AND a procedure code (CPT or HCPCS) with a Service_Type_High_Code='SURG' (there are 5808 CPT codes and 341 HCPCS codes that fall into this category—see attached list of codes)

FOS_procedure codes.xls

     - **OR** a POS code of 05, 06, 07, 08, 11, 22, 24, 25, 26, 49, 50 or 72 AND a Revenue Code of 0360, 0361, 0369, 0490, 0499.

   - The service date timeframe for claims included in an OP Surgery event is up to +/- 2 days of the service date on the trigger record.
   - To create an Outpatient Surgery event, the claim detail must *not* meet the coding conditions listed for an Admission/Confinement (FIP) event.

3. Emergency Room (FER)
   - An Emergency Room Event is identified on a claim record in which the CPT code or revenue code stands for emergency room or emergency evaluation and management, and the provider specialty represents General Hospital, Psychiatric Hospital or Emergency Care Center.
     - A revenue code of 0450-0452 or 0459
     - **OR** CPT procedure code 99281-99285, 99288 or HCPCS procedure code G0380-G0384 AND a Detail Level Provider Category of General Hospital, Psychiatric Hospital or Emergency Care Center.
     - **OR** CPT procedure code 99281-99285, or 99288 or HCPCS procedure code G0380-G0384 AND [there is at least one other claim detail record which will be associated with the trigger record with a revenue code that is *not* 0456 (Urgent Care) AND a Detail Level Provider Category of General Hospital, Psychiatric Hospital or Emergency Care Center].
   - The service date timeframe for claims included in an Emergency Room (FER) event are up to +/- 2 days of the service date on the trigger record.
   - To create an Emergency Room event, the claim detail must *not* meet any of the coding conditions for an Admission/Confinement (FIP) or Outpatient Surgery (FOS) event.

4. Other (OTH)
   - All service records that are not assigned FIP, FOS, or FER are assigned OTH

Result/EBM/Compliance Flags

Result Flags and Values

The Result flag provides a status for each clinical rule in any condition for which the member has qualified. The five possible Result flag values are described below.

- Yes means the answer to the clinical question is yes.
- No means the answer to the clinical question is no.
- NA (not applicable) means the rule is not applicable to the member. A rule may not be applicable for a number of reasons. The third character of the NA flag contains a number which further defines the reason (see below).
- NRX (no RX benefit) indicates that the member did not have any pharmacy benefit during the reporting period. The NRX value is only applicable to certain rules that are pharmacy dependent.
- Q (questionable) indicates that the member has no claim record for the particular test or treatment during the time window of the rule, but the member did not have coverage throughout the time window or there was insufficient time range of input claims data, and hence, there may be data incompleteness. The Q value is applied only for certain rules and certain setup configurations.

Result Flag Value	Description
NA1	Member did not meet the age or gender criteria.
NA2	Member was not currently taking the medication in question or had not taken it for the required duration.
NA3	Member was taking the medication, but a possession ratio could not be computed [less than two prescriptions during the rule time window].
NA4	Member did not meet the rule specific criteria [e.g., co-morbidity, complexity (diagnosis and medication), intervention not warranted].
NA5	No lab result record or insufficient information.
NA6	Member admitted to a hospital or long term care facility which might cause data incompleteness.
NA7	Member who did not receive treatment or medication had a contraindication or other justification.

EBM Flag

The EBM flag provides a counter for rules in which the result is NOT consistent with evidence based guidelines. There are two possible results for the EBM flag counter:

- 1 when a result is ***not*** consistent with the EBM Connect software's evidence based guidelines, and
- 0 when any of the following are true:
  - the member's care is consistent with the software's evidence based guidelines
  - the rule is not relevant to the member
  - there is insufficient information in the database to analyze the rule
  - the rule is informational only, and does not reflect appropriateness of care

Compliance Flag

The Compliance flag provides a counter for cases in which the result ***is*** consistent with evidence based guidelines. There are two possible results for the Compliance flag counter:

- 1 when a result ***is*** consistent with the EBM Connect software's evidence based guidelines, and
- 0 when any of the following are true:
  - the member's care is not consistent with the software's evidence based guidelines
  - the rule is not relevant to the member
  - there is insufficient information in the database to analyze the rule
  - the rule is informational only, and does not reflect appropriateness of care

THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0

August 2008

The measure information you submit will be shared with NQF's Steering Committees and Technical Advisory Panels to evaluate measures against the NQF criteria of importance to measure and report, scientific acceptability of measure properties, usability, and feasibility. Four conditions (as indicated below) must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards. Not all acceptable measures will be strong—or equally strong—among each set of criteria. The assessment of each criterion is a matter of degree; however, all measures must be judged to have met the first criterion, importance to measure and report, in order to be evaluated against the remaining criteria. References to the specific measure evaluation criteria are provided in parentheses following the item numbers. Please refer to the *Measure Evaluation Criteria* for more information at *www.qualityforum.org* under Core Documents. Additional guidance is being developed and when available will be posted on the NQF website.

Use the tab or arrow (↓→) keys to move the cursor to the next field (or back ←↑). There are three types of response fields:

- drop-down menus - select one response;
- check boxes – check as many as apply; and
- text fields – you can copy and paste text into these fields or enter text; these fields are not limited in size, but in most cases, we ask that you summarize the requested information.

Please note that URL hyperlinks do not work in the form; you will need to type them into your web browser.

Be sure to answer all questions. Fields that are left blank will be interpreted as no or none. Information must be provided in this form. Attachments are not allowed except when specifically requested or to provide additional detail or source documents for information that is summarized in this form. If you have important information that is not addressed by the questions, they can be entered into item #48 near the end of the form.

For questions about this form, please contact the NQF Project Director listed in the corresponding call for measures.

	CONDITIONS FOR CONSIDERATION BY NQF
	Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards.
A (A)	*Public domain or Intellectual Property Agreement signed: IP Agreement signed and submitted (If no, do not submit)* *Template for the Intellectual Property Agreement is available at www.qualityforum.org under Core Documents.*
B (B)	*Measure steward/maintenance: Is there an identified responsible entity and process to maintain and update the measure on a schedule commensurate with clinical innovation, but at least every 3 years?* *Yes, information provided in contact section (If no, do not submit)*
C (C)	*Intended use: Does the intended use of the measure include BOTH public reporting AND quality improvement? Yes (If no, do not submit)*
D (D)	*Fully developed and tested: Is the measure fully developed AND tested? Yes, fully developed and tested (If not tested and no plans for testing within 24 months, do not submit)*

THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0

August 2008

	(for NQF staff use) NQF Review #: EC-231-08 NQF Project: National Voluntary Consensus Standards for Ambulatory Care Using Clinically Enriched Administrative Data
	MEASURE SPECIFICATIONS & DESCRIPTIVE INFORMATION
1	*Information current as of (date- MM/DD/YY): 06/25/09*
2	*Title of Measure: Diabetes with LDL greater than 100 – Use of a Lipid Lowering Agent*
3	**Brief description of measure [1]:** Percentage of adult patients with diabetes mellitus and an LDL value greater than 100 mg/dL with a current refill for a lipid lowering agent
4 (2a)	**Numerator Statement:** Patients with a current refill for a lipid lowering agent **Time Window:** A drug day-supply that extends within 30 days of the measurement date **Numerator Details** (Definitions, codes with description): see attached
5 (2a)	**Denominator Statement:** All diabetic patients, who are either 41 - 75 years of age or 18-40 years of age with additional risk factors, with an LDL level greater than 100 mg/dL. **Time Window:** 5 years **Denominator Details** (Definitions, codes with description): see attached
6 (2a, 2d)	**Denominator Exclusions:** 1. Specific exclusions: Patient-derived data indicating that the provider made a change to their lipid treatment plan in the past 6 months, or confirming breastfeeding in the past 6 months Pregnancy Polycyctic ovaries Gestational diabetes 2. General exclusions: • Evidence of metastatic disease or active treatment of malignancy (chemotherapy or radiation therapy) in the last 6 months; • Patients who have been in a skilled nursing facility in the last 3 months For add a drug CCs only • Patient or provider feedback indicating allergy or intolerance to the drug in the past • Patient or provider feedback indicating that there is a contraindication to adding the drug **Denominator Exclusion Details** (Definitions, codes with description): see attached
7 (2a, 2h)	**Stratification** Do the measure specifications require the results to be stratified? No ► If "other" describe: **Identification of stratification variable(s):** **Stratification Details** (Definitions, codes with description):
8	**Risk Adjustment** Does the measure require risk adjustment to account for differences in patient

[1] Example of measure description: Percentage of adult patients with diabetes aged 18-75 years receiving one or more A1c test(s) per year.

(2a, 2e)	severity before the onset of care? No ► **If yes,** (select one) ► Is there a separate proprietary owner of the risk model? (select one) **Identify Risk Adjustment Variables:** **Detailed risk model:** attached ☐ **OR** Web page URL:
9 (2a)	**Type of Score:** Rate/proportion **Calculation Algorithm:** attached ☒ **OR** Web page URL: **Interpretation of Score** (*Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score*) Better quality = Higher score ► If "Other", please describe:
10 (2a. 4a, 4b)	**Identify the required data elements**(e.g., primary diagnosis, lab values, vital signs)**:** ICD9, CPT, pharmacy claims, lab values, patient derived data **Data dictionary/code table** attached ☒ **OR** Web page URL: **Data Quality** (2a) *Check all that apply* ☒ Data are captured from an authoritative/accurate source (e.g., lab values from laboratory personnel) ☒ Data are coded using recognized data standards ☒ Method of capturing data electronically fits the workflow of the authoritative source ☐ Data are available in EHRs ☐ Data are auditable
11 (2a, 4b)	**Data Source and Data Collection Methods** *Identifies the data source(s) necessary to implement the measure specifications. Check all that apply* ☐ Electronic Health/Medical Record ☐ Electronic Clinical Database, Name: ☐ Electronic Clinical Registry, Name: ☒ Electronic Claims ☒ Electronic Pharmacy data ☒ Electronic Lab data ☐ Electronic source – other, Describe: ☐ Paper Medical Record ☐ Standardized clinical instrument, Name: ☐ Standardized patient survey, Name: ☐ Standardized clinician survey, Name: ☐ Other, Describe: Instrument/survey attached ☐ **OR** Web page URL:
12 (2a)	**Sampling** *If measure is based on a sample, provide instructions and guidance on sample size.* **Minimum sample size:** **Instructions:**
13 (2a)	**Type of Measure:** Process ► If "Other", please describe: ► If part of a composite or paired with another measure, please identify composite or paired measure
14 (2a)	**Unit of Measurement/Analysis** (*Who or what is being measured*) *Check all that apply.* ☒ Can be measured at all levels ☐ Individual clinician (e.g., physician, nurse) ☐ Group of clinicians (e.g., facility department/unit, group practice) ☐ Facility (e.g., hospital, nursing home) ☐ Integrated delivery system ☐ Health plan ☐ Community/Population ☐ Other (*Please describe*):
15 (2a)	**Applicable Care Settings** *Check all that apply* ☐ Can be used in all healthcare settings ☒ Ambulatory Care (office/clinic) ☐ Behavioral Healthcare ☒ Community Healthcare ☐ Dialysis Facility ☐ Emergency Department ☐ EMS emergency medical services ☒ Health Plan ☐ Home Health ☐ Hospice ☐ Hospital ☐ Long term acute care hospital ☒ Nursing home/ Skilled Nursing Facility (SNF) ☐ Prescription Drug Plan ☐ Rehabilitation Facility ☐ Substance Use Treatment Program/Center ☐ Other (*Please describe*):

	IMPORTANCE TO MEASURE AND REPORT
	Note: This is a threshold criterion. If a measure is not judged to be sufficiently important to measure and report, it will not be evaluated against the remaining criteria.
16 (1a)	**Addresses a Specific National Priority Partners Goal** *Enter the numbers of the specific goals related to this measure (see list of goals on last page)*: 2.1,2.2,6.1
17 (1a)	**If not related to NPP goal, identify high impact aspect of healthcare** (select one) **Summary of Evidence:** **Citations[2] for Evidence:**
18 (1b)	**Opportunity for Improvement** *Provide evidence that demonstrates considerable variation, or overall poor performance, across providers.* **Summary of Evidence:** ADA Guidelines:Evidence for benefits of lipid lowering therapy Patients with type 2 diabetes have an increased prevalence of lipid abnormalities, which contributes to their high risk of CVD. For the past decade or more, multiple clinical trials demonstrated significant effects of pharmacologic (primarily statin) therapy on CVD outcomes in subjects with CHD and for primary CVD prevention. Sub-analyses of diabetic subgroups of larger trials and trials specifically in subjects with diabetes showed significant primary and secondary prevention of CVD events CHD deaths in diabetic populations. As shown in Table 10, and similar to findings in nondiabetic subjects, reduction in "hard" CVD outcomes (CHD death and nonfatal myocardial infarction) can be more clearly seen in diabetic subjects with high baseline CVD risk (known CVD and/or very high LDL cholesterol levels), but overall the benefits of statin therapy in people with diabetes at moderate or high risk for CVD are convincing. Low HDL cholesterol levels, which are often associated with elevated triglyceride levels, are the most prevalent pattern of dyslipidemia in persons with type 2 diabetes. However, the evidence base for drugs that target these lipid fractions is significantly less robust than that for statin therapy. In a study conducted in a nondiabetic cohort, nicotinic acid reduced CVD outcomes. Gemfibrozil has been shown to decrease rates of CVD events in subjects without diabetes and in the diabetic subgroup in one of the larger trials. However, in a large trial specific to diabetic patients, fenofibrate failed to reduce overall cardiovascular outcomes. **Citations for Evidence:** Standards of Medical Care in Diabetes - 2009. Diabetes Care 2009 31: S13-S61.
19 (1b)	**Disparities** *Provide evidence that demonstrates disparity in care/outcomes related to the measure focus among populations.* **Summary of Evidence:** Diabetes disparities: African Americans African Americans born in the year 2000 face a 2 in 5 risk for diabetes. Compared to whites, African Americans are more than twice as likely to have diabetes. From 1980 through 2005, the age-adjusted prevalence of diagnosed diabetes doubled among black males and increased 69% among black females. However, of all groups observed, black females had the highest overall prevalence. Hispanics/Latinos (H/L) Hispanics born in the year 2000 face a 2 in 5 risk for diabetes. Compared to whites, Hispanics are more than twice as likely to have diabetes. From 1997 through 2005, the age-adjusted prevalence among Hispanics increased 16% among males and 21% among females.

[2] Citations can include, but are not limited to journal articles, reports, web pages (URLs).

	American Indians / Alaska Natives (AI/AN) Among people younger than 20, American Indians aged 10-19 have the highest prevalence of type 2 diabetes. LLA Management Disparities: Racial Disparities in Lipid Management in Patients with Diabetes. To describe lipid management over time in a cohort of patients with diabetes (DM) and evaluate whether care receipt differed between African American and White populations in an equal access environment. STUDY DESIGN: Automated claims and clinical databases were used to identify a cohort of patients with DM in 1997/1998 that was retrospectively followed through 2002 (mean follow-up = 42.1 months). Overall and race stratified rates of hypercholesterolemia screening, treatment and goal achievement were estimated in each follow-up year. Treatment was determined by a claim for lipid lowering agents and goal attainment was defined as low density lipoprotein cholesterol (LDL-C) less than 100 and 130 mg/dL. POPULATION STUDIED: Retrospective cohort of 11,411 HMO enrollees aged 18+ years (50.8% female; 53.2% White, 43.1% African American, and 3.7% other), with DM who were continuously enrolled during 1997/1998. PRINCIPAL FINDINGS: During follow-up, rates of testing, treatment and goal attainment improved over time for both races. Racial disparities favoring the White cohort were evident for all rates in each year. Rates of testing increased from 60.7% in 1999 to 76.8% in 2002 for Whites and 48.2% to 71.1%, respectively for African Americans. Rates of treatment increased from 34.6% in 1999 to 53.4% in 2002 for Whites and 26.1% to 45.7%, respectively for African Americans. Rates of goal achievement at LDL-C <100 mg/dL increased from 34.9% in 1999 to 42.5% in 2002 for Whites and 23.9% to 30.8%, respectively for African Americans. Rates of goal achievement at LDL-C <130 mg/dL increased from 71.2% in 1999 to 79.7% in 2002 for Whites and 59.1% to 67.6%, respectively for African Americans. Among patients treated with lipid lowering agents, rates of goal achievement over the same period improved from 67.3% to 75.5% when using a goal of LDL-C <130 mg/dL but only 34.1% to 40.3% when using the currently recommended goal of LDL-C <100 mg/dL. CONCLUSIONS: Our preliminary findings show that racial disparities in rates of testing tended to decrease over time, while those associated with LDL-C goal achievement and treatment with lipid lowering drugs tended to persist over time. Overall gains in all rates were achieved between 1999 and 2002 but the percentage of these high risk patients at the current recommended LDL-C goal (i.e., LDL-C <100 mg/dL) remains low regardless of race. We are in the process of evaluating these racial disparities adjusting for other factors. IMPLICATIONS FOR POLICY, DELIVERY OR PRACTICE: This research shows persistent underachievement of recommended LDL-C goal levels among those known to be at elevated risk for cardiovascular disease, especially among African Americans. Since appropriate use of preventive and early diagnostic interventions is key in reducing the health and economic burden of cardiovascular disease it is incumbent on health care delivery systems to address these disparities in treatment. **Citations for evidence:** Eliminate Disparities in Diabetes. Office of Minority Health & Health Disparities (OMHD). Accessed October 22, 2008 at: http://www.cdc.gov/omhd/AMH/factsheets/diabetes.htm Racial Disparities in Lipid Management in Patients with Diabetes. Abstr AcademyHealth Meet. 2005; 22: abstract no. 3300.
20 (1c)	**If measuring an Outcome** Describe relevance to the national health goal/priority, condition, population, and/or care being addressed: **If not measuring an outcome, provide evidence supporting this measure topic and grade the strength of the evidence** *Summarize the evidence (including citations to source) supporting the focus of the measure as follows:* • Intermediate outcome – evidence that the measured intermediate outcome (e.g., blood pressure, Hba1c) leads to improved health/avoidance of harm or cost/benefit. • Process – evidence that the measured clinical or administrative process leads to improved health/avoidance of harm and if the measure focus is on one step in a multi-step care process, it measures the step that has the greatest effect on improving the specified desired outcome(s). • Structure – evidence that the measured structure supports the consistent delivery of effective

processes or access that lead to improved health/avoidance of harm or cost/benefit.

- Patient experience – evidence that an association exists between the measure of patient experience of health care and the outcomes, values and preferences of individuals/ the public.
- Access – evidence that an association exists between access to a health service and the outcomes of, or experience with, care.
- Efficiency– demonstration of an association between the measured resource use and level of performance with respect to one or more of the other five IOM aims of quality.

Type of Evidence *Check all that apply*

☒ Evidence-based guideline	☐ Quantitative research studies
☐ Meta-analysis	☐ Qualitative research studies
☐ Systematic synthesis of research	☐ Other (*Please describe*):

Overall Grade for Strength of the Evidence[3] (*Use the USPSTF system, or if different, also describe how it relates to the USPSTF system)*: (A) Clear evidence from well-conducted, generalizable, randomized controlled trials that are adequately powered, including:
● Evidence from a well-conducted multicenter trial
● Evidence from a meta-analysis that incorporated quality ratings in the analysis Compelling nonexperimental evidence, i.e., "all or none" rule developed by the Centre for Evidence-Based Medicine at Oxford Supportive evidence from well-conducted randomized controlled trials that are adequately powered, including:
● Evidence from a well-conducted trial at one or more institutions
● Evidence from a meta-analysis that incorporated quality ratings in the analysis

Summary of Evidence (*provide guideline information below*):

Intermediate outcome

ADA Guidelines:Evidence for benefits of lipid lowering therapy Patients with type 2 diabetes have an increased prevalence of lipid abnormalities, which contributes to their high risk of CVD. For the past decade or more, multiple clinical trials demonstrated significant effects of pharmacologic (primarily statin) therapy on CVD outcomes in subjects with CHD and for primary CVD prevention. Sub-analyses of diabetic subgroups of larger trials and trials specifically in subjects with diabetes showed significant primary and secondary prevention of CVD events CHD deaths in diabetic populations. As shown in Table 10, and similar to findings in nondiabetic subjects, reduction in "hard" CVD outcomes (CHD death and nonfatal myocardial infarction) can be more clearly seen in diabetic subjects ith high baseline CVD risk (known CVD and/or very high LDL cholesterol levels), but overall the benefits of statin therapy in people with diabetes at moderate or high risk for CVD are convincing. Low HDL cholesterol levels, which are often associated with elevated triglyceride levels, are the most prevalent pattern of dyslipidemia in persons with type 2 diabetes. However, the evidence base for drugs that target these lipid fractions is significantly less robust than that for statin therapy. In a study conducted in a nondiabetic cohort, nicotinic acid reduced CVD outcomes. Gemfibrozil has been shown to decrease rates of CVD events in subjects without diabetes and in the diabetic subgroup in one of the larger trials. However, in a large trial specific to diabetic patients, fenofibrate failed to reduce overall cardiovascular outcomes.

Citations for Evidence: Standards of Medical Care in Diabetes - 2009. Diabetes Care 2009 31: S13-S61.

21	**Clinical Practice Guideline** *Cite the guideline reference; quote the specific guideline recommendation*

[3]The strength of the body of evidence for the specific measure focus should be systematically assessed and rated, e.g., USPSTF grading system www.ahrq.gov/clinic/uspstmeth.htm: A - The USPSTF recommends the service. There is high certainty that the net benefit is substantial. B - The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial. C - The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is at least moderate certainty that the net benefit is small. Offer or provide this service only if other considerations support the offering or providing the service in an individual patient. D - The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. I - The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

(1c)	*related to the measure and the guideline author's assessment of the strength of the evidence; and summarize the rationale for using this guideline over others.* **Guideline Citation:** Standards of Medical Care in Diabetes - 2009. Diabetes Care 2009 31: S13-S61. **Specific guideline recommendation:** Treatment recommendations and goals Statin therapy should be added to lifestyle therapy, regardless of baseline lipid levels, for diabetic patients: ● with overt CVD (A) ● without CVD who are over the age of 40 and have one or more other CVD risk factors. (A) ● For lower-risk patients than those specified above (e.g., without overt CVD and under the age of 40), statin therapy should be considered in addition to lifestyle therapy if LDL cholesterol remains >100 mg/dl or in those with multiple CVD risk factors (E) ● In individuals without overt CVD, the primary goal is an LDL cholesterol <100 mg/dl (2.6 mmol/l). (A) **Guideline author's rating of strength of evidence** (*If different from USPSTF, also describe it and how it relates to USPSTF)*: (A) Clear evidence from well-conducted, generalizable, randomized controlled trials that are adequately powered, including: ● Evidence from a well-conducted multicenter trial ● Evidence from a meta-analysis that incorporated quality ratings in the analysis Compelling nonexperimental evidence, i.e., "all or none" rule developed by the Centre for Evidence-Based Medicine at Oxford Supportive evidence from well-conducted randomized controlled trials that are adequately powered, including: ● Evidence from a well-conducted trial at one or more institutions ● Evidence from a meta-analysis that incorporated quality ratings in the analysis **Rationale for using this guideline over others:** Nationally recognized guideline
22 (1c)	**Controversy/Contradictory Evidence** *Summarize any areas of controversy, contradictory evidence, or contradictory guidelines and provide citations.* **Summary:** **Citations:**
23 (1)	**Briefly describe how this measure (as specified) will facilitate significant gains in healthcare quality related to the specific priority goals and quality problems identified above:** Patients with diabetes and elevated LDL level are at a higher risk for cardiovascular disease and the initiation of a lipid lowering agent may decrease this risk and subsequent complications.
	SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES
	Note: Testing and results should be summarized in this form. However, additional detail and reports may be submitted as supplemental information or provided as a web page URL. If a measure has not been tested, it is only potentially eligible for time-limited endorsement.
24	**Supplemental Testing Information:** attached ☐ **OR** Web page URL:
25 (2b)	**Reliability Testing** **Data/sample:** **Analytic Method:** **Testing Results:**
26	**Validity Testing**

(2c)	**Data/sample:** **Analytic Method:** **Testing Results:**
27 (2d)	**Measure Exclusions** *Provide evidence to justify exclusion(s) and analysis of impact on measure results during testing.* **Summary of Evidence supporting exclusion(s):** **Citations for Evidence:** **Data/sample:** **Analytic Method:** **Testing Results:**
28 (2e)	**Risk Adjustment Testing** *Summarize the testing used to determine the need (or no need) for risk adjustment and the statistical performance of the risk adjustment method.* **Data/sample:** **Analytic Method:** **Testing Results:** ►**If outcome or resource use measure not risk adjusted, provide rationale:**
29 (2g)	**Testing comparability of results when more than 1 data method is specified** (*e.g., administrative claims or chart abstraction*) **Data/sample:** **Analytic Method:** **Results:**
30 (2f)	**Provide Measure Results from Testing or Current Use** Results from testing **Data/sample:** We measured a commercial population of 459,196 members. **Methods to identify statistically significant and practically/meaningfully differences in performance:** Compliance to the performance measure is measured using an analysis of the claims data; in this case looking for evidence of a statin. In addition, where appropriate we analyze patient data collected either from the patient's PHR or during a disease management program. **Results:** We found that of the 347 members who satisfied the denominator, 239 were in the numerator, indicating a compliance rate of 69%
31 (2h)	**Identification of Disparities** ►If measure is stratified by factors related to disparities (i.e. race/ethnicity, primary language, gender, SES, health literacy), **provide stratified results:** ►If disparities have been reported/identified, but measure is not specified to detect disparities, provide rationale:
	USABILITY
32 (3)	*Current Use Testing completed If in use, how widely used Health plan or sytem ► If "other," please describe:*

	☐ *Used in a public reporting initiative, name of initiative:* *Sample report attached* ☐ *OR Web page URL:*
33 (3a)	**Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **Data/sample:** Administrative claims database from health plans; lab results data; patient derived data. **Methods:** The performance measure is similar in message to a clinical alert that has been operational since 2001. Compliance to the clinical alert is measured using an analysis of subsequent claims, in this case the appearance of pharmacy claims for a statin. In addition, a feedback tool accompanies every clinical alert message, and includes options indicating agreement or disagreement with the message. **Results:** In practice, fewer than 1% of the respondents disagreed with the medical literature, and more than 32% show objective evidence of compliance with the clinical alert.
34 (3b, 3c)	**Relation to other NQF-endorsed™ measures** ►Is this measure similar or related to measure(s) already endorsed by NQF (on the same topic or the same target population)? *Measures can be found at www.qualityforum.org under Core Documents.* *Check all that apply* ☐ Have not looked at other NQF measures ☒ Other measure(s) on same topic ☒ Other measure(s) for same target population ☐ No similar or related measures **Name of similar or related NQF-endorsed™ measure(s):** Diabetes - Lipid management **Are the measure specifications harmonized with existing NQF-endorsed™ measures?** Not harmonized ►If not fully harmonized, provide rationale: The proposed measure has been developed to use clinically enriched claims data; the data elements and rule algorithms are designed to optimize case-finding while maintaining specificity. **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:** The computerized data elements and rule algorithms employed by the proposed measure make it feasible to analyze large populations in order to identify individuals appropriate for the measure, with a minimal administrative burden. Other case-finding methodologies have been limited by the need for chart review and data abstraction.
	FEASIBILITY
35 (4a)	*How are the required data elements generated? Check all that apply* ☒ *Data elements are generated concurrent with and as a byproduct of care processes during care delivery (e.g., blood pressure or other assessment recorded by personnel conducting the assessment)* ☐ *Data elements are generated from a patient survey (e.g., CAHPS)* ☒ *Data elements are generated through coding performed by someone other than the person who obtained the original information (e.g., DRG or ICD-9 coding on claims)* ☒ *Other, Please describe: Data obtained through electronic personal health records and telephonic, nurse-driven disease management programs*
36 (4b)	*Electronic Sources All data elements* ►*If all data elements are not in electronic sources, specify the near-term path to electronic collection by most providers:* ►*Specify the data elements for the electronic health record:*
37 (4c)	*Do the specified exclusions require additional data sources beyond what is required for the other specifications? No* ►*If yes, provide justification:*
38 (4d)	*Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure:* *Generally, the use of claims data has inherent errors and inaccuracies related to incorrect coding, or missing data, which can result in less specificity in the definition of denominator and /or the numerator.*

	To minimize these errors and inaccuracies, we use clinically enriched data (laboratory results, medication lists) to augment the claims data. In addition where possible, to corroborate the claims data, we solicit feedback from both providers via a feedback form and from patients from a personal health record or from a disease management program. *We do not anticipate significant unintended consequences from the implementation of the measure. Our measures are all developed from evidence-based literature or from clinical guidelines and are designed to encourage appropriate care of the patient.* *Describe how could these potential problems be audited: The inclusion of patient-derived data from a personal health record or through a disease management program may be used to confirm the presence or absence of a medication; ultimately the data sources may be tested against a sample of medical charts.* *Did you audit for these potential problems during testing? No If yes, provide results:*
39 (4e)	*Testing feasibility Describe what have you learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues: Multiple sources of corroborating clinical data are necessary to correctly identify patients in the denominator. Earlier testing efforts using specifications similar to HEDIS were more sensitive yet nonspecific. The addition of supporting information for certain diagnostic conditions (e.g., diabetic medications and supplies in addition to ICD9 codes for diabetes) significantly decreased the number identified in the denominator, yet the analysis led to a much higher compliance rate, likely because of the exclusion of fewer false positives in the denominator.*
	CONTACT INFORMATION
40	*Web Page URL for Measure Information Describe where users (implementers) should go for more details on specifications of measures, or assistance in implementing the measure.* *Web page URL: www.activehealth.net*
41	**Measure Intellectual Property Agreement Owner Point of Contact** **First Name:** Madhavi **MI:** **Last Name:** Vemireddy **Credentials (MD, MPH, etc.):** MD **Organization:** ActiveHealth Management **Street Address:** 102 Madison Avenue **City:** New York **State:** NY **ZIP:** 10016 **Email:** mvemireddy@activehealth.net **Telephone:** 212-651-8200 ext:
42	**Measure Submission Point of Contact** **If different than IP Owner Contact** **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):** **Organization:** **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext:
43	**Measure Developer Point of Contact** **If different than IP Owner Contact** **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):** **Organization:** **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext:
44	**Measure Steward Point of Contact** **If different than IP Owner Contact** *Identifies the organization that will take responsibility for updating the measure and assuring it is consistent with the scientific evidence and current coding schema; the steward of the measure may be different than the developer.* **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):** **Organization:** **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext
	ADDITIONAL INFORMATION

45	**Workgroup/Expert Panel involved in measure development** No workgroup or panel used ►If workgroup used, describe the members' role in measure development: ►Provide a list of workgroup/panel members' names and organizations:
46	*Measure Developer/Steward Updates and Ongoing Maintenance* *Year the measure was first released: 6/01/2001* *Month and Year of most recent revision: 6/2008* *What is the frequency for review/update of this measure? Biennially* *When is the next scheduled review/update for this measure? 2010*
47	**Copyright statement/disclaimers:** This information, including any attachments hereto, is the sole, exclusive, proprietary and confidential property of Active Health Management, Inc., and is for the exclusive use of The National Quality Forum. Any use, copying, disclosure, dissemination or distribution by anyone other than the National Quality Forum is strictly prohibited.
48	**Additional Information:**
49	**I have checked that the submission is complete and any blank fields indicate that no information is provided.**☒
50	**Date of Submission** (*MM/DD/YY*)**:** 02/09/2009

PATIENT & FAMILY ENGAGEMENT

PRIORITY STATEMENT: Engage Patients and Their Families in Managing Their Health and Making Decisions About Their Care

1.1. All providers will routinely solicit and publicly report on their patients' perspectives of care

1.2. All providers will work collaboratively with their patients to assist them in making informed decisions about treatment options consistent with their values and preferences

POPULATION HEALTH

PRIORITY STATEMENT: IMPROVE THE HEALTH OF THE U.S. POPULATION

2.1. The population will be up to date on all high-priority age- and gender-appropriate evidence-based clinical preventive services

2.2. The population will receive recommended evidence-based interventions to improve targeted healthy lifestyle behaviors

2.3. All communities will demonstrate a 10% improvement in their community index of health

2.4. Americans will have all recommended high priority healthy lifestyle behaviors under control

SAFETY

PRIORITY STATEMENT: IMPROVE THE SAFETY OF THE U.S. HEALTH CARE SYSTEM

3.1. All providers will drive all preventable healthcare-associated infections (HAI) to zero

3.2. All providers will drive the incidence of preventable NQF Serious Reportable Events (SRE) to zero

3.3. All hospitals will reduce preventable and premature mortality rates to best-in-class

3.4. All hospitals and their community partners will reduce 30-day mortality rates following hospitalization for select conditions to best-in-class

PALLIATIVE CARE

PRIORITY STATEMENT: GUARANTEE APPROPRIATE AND COMPASSIONATE CARE FOR PATIENTS WITH LIFE-LIMITING ILLNESSES

4.1. All providers will identify, document, and effectively treat physical symptoms (e.g. pain, shortness of breath, constipation, others) at levels acceptable to patients with a life-limiting illness

4.2. All providers will effectively address the psychosocial and spiritual needs of patients with life-limiting illnesses and their families according to their preferences

4.3. All eligible patients will receive high quality palliative care and hospice services

CARE COORDINATION

PRIORITY STATEMENT: ENSURE PATIENTS RECEIVE WELL-COORDINATED CARE ACROSS ALL PROVIDERS, SETTINGS, AND LEVELS OF CARE

5.1. All providers will accurately and completely reconcile medications across the continuum of care (i.e. admission, transfer within and between care providers, discharge, and outpatient appointments) and ensure communication with the next provider of services

5.2. All inpatient and outpatient providers will assess the patient's perspective of the coordination of their care using a validated care coordination survey tool

5.3. All providers will reduce 30-day all-cause readmission rates resulting from poorly coordinated care to best-in-class

5.4. All providers will reduce preventable emergency department (i.e. those that could be avoided with timely access to primary care) visits resulting from poorly coordinated care by 50%

PATIENT-FOCUSED CARE

PRIORITY STATEMENT: GUARANTEE HIGH VALUE CARE ACROSS ACUTE AND CHRONIC EPISODES

6.1. All patients will receive high-value care over the course of their acute or chronic illness

OVERUSE

PRIORITY STATEMENT: ELIMINATE WASTE WHILE ENSURING THE DELIVERY OF APPROPRIATE CARE

7.1. Reduce wasteful and inappropriate care for the top ten targeted areas by 50%

PERFORMANCE MEASURE RULE

Diabetes with LDL greater than 100 – Use of a Lipid Lowering Agent

DENOMINATOR

All of the following are correct

a. Diabetes Validation is confirmed for the member (see below)

b. One of the following

   i. Presence of 1 LDL (LOINC) value greater than 100 in the past 3 months

   ii. Presence of patient data confirming PDD – LDL VALUE greater than 100 in the past 3 months

c. One of the Following is correct:

   i. Patient age 41 - 75years

   ii. All of the following are correct:

      1. Patients age between 18 and 40 years

      2. One of the following is correct:

         a. Hypertension Validation is confirmed for the member (see below)

         b. Presence of patient data confirming PDD - SMOKER in the past 12 months

         c. Presence of patient data confirming PDD – FHx PREMATURE CAD in the past 12 months

DENOMINATOR EXCLUSIONS

One of the following is correct:

1. Presence of patient data confirming at least 1 PDD - LIPID TREATMENT CHANGE in the past 6 months

2. Presence of patient data confirming breast feeding in the past 6 months

3. If Pregnancy Exclusion Validation is confirmed for the member (see below)

NUMERATOR

1. All of the Following are correct:
    a. Denominator is true
    b. One of the following is correct:
        i. Presence of a current refill for LIPID LOWERING AGENTS
        ii. Presence of Patient Data Confirming LIPID LOWERING AGENTS drug in the past 6 months

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Diabetes Adult Validation

All of the following are correct:

1. Patient age ≥18 years
2. One of the following is correct:
    a. Presence of patient data confirming at least 1 PDD- DIABETES in the past 24 months
    b. Presence of at least 4 claims DIABETES MELLITUS diagnosis in the past 12 months with at least a 3 month separation between claims
    c. All of the following are correct:
        i. Presence of at least 1 DIABETES MELLITUS diagnosis in the past 5 years beginning at least 1 month in the past
        ii. One of the following is correct:
            1. Presence of at least 2 refills DM MEDS AND SUPPLIES exists in the past 12 months
            2. Presence of at least 2 DM MEDS AND SUPPLIES (HCPCS) procedure in the past 12 months
            3. Presence of at least 1 INSULIN THERAPY (HCPCS) procedure in the past 12 months

4. Presence of at least 1 HBA1C VALUE > 7.5 in the past 12 months

Diabetes Validation Exclusion

One of the following is correct:
1. Presence of 2 STEROID-INDUCED DM diagnosis in the past 12 months
2. All of the following are correct:
   - Presence of at least 2 GESTATIONAL DM/POLYCYSTIC OVARIES diagnosis in the past 12 months
   - Female gender

Hypertension Validation

All of the following are correct:

1. Patient age ≥ 18 years
2. One of the following is correct:
   a. Presence of PDD- HYPERTENSION in the past 24 months
   b. Presence of at least 4 HYPERTENSION diagnosis at least 3 month apart in the past 24 months
   c. All of the following are correct:
      i. Presence of at least 2 HYPERTENSION diagnosis at least 1 month apart in the past 24 months
      ii. One of the following is correct:
         1. Presence of at least 1 refill for ANTIHYPE/ALL in the past 6 months
         2. Presence of patient data confirming at least 1 refill for ANTIHYPE/ALL in the past 6 months
         3. Presence of AMBULATORY (24H) BP MONITORING in past 24 months

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Pregnancy Exclusion Validation

a. One of the following is correct:
   a. Presence of At Least 1 HCG (LOINC) Labs Result Value > 100 in the past 6 months
   b. Presence of Patient Data Confirming At Least 1 PDD- PREGNANCY in the past 6 months
   c. Presence of At Least 1 PREGNANCY Diagnosis in the past 6 months

d. Presence of At Least 1 PREGNANCY RELATED PROCEDURE in the past 6 months

b. Exclusion - If One of the Following is correct
    a. Presence of At Least 1 DELIVERY AND ABORTION (ICD9) Diagnosis in the past 3 months
    b. Presence of At Least 1 HYSTERECTOMY Procedure in the past 3 months
    c. Presence of At Least 1 DELIVERY AND ABORTION (CPT) Procedure in the past 3 months
    d. Presence of At Least 1 Refill UTEROTONICS Exists in the past 3 months
    e. Presence of At Least 1 NONVIABLE PREGNANCY Diagnosis in the past 3 months

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Note: A 3 month time window has been added to certain timeframes in order to account for the inherent delay in the acquisition of administrative claims data.

Note: A current refill is defined as a refill in which the day supply of a drug extends into the end of the measurement window plus a grace period of 30 days.

THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0

August 2008

The measure information you submit will be shared with NQF's Steering Committees and Technical Advisory Panels to evaluate measures against the NQF criteria of importance to measure and report, scientific acceptability of measure properties, usability, and feasibility. Four conditions (as indicated below) must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards. Not all acceptable measures will be strong—or equally strong—among each set of criteria. The assessment of each criterion is a matter of degree; however, all measures must be judged to have met the first criterion, importance to measure and report, in order to be evaluated against the remaining criteria. References to the specific measure evaluation criteria are provided in parentheses following the item numbers. Please refer to the *Measure Evaluation Criteria* for more information at *www.qualityforum.org* under Core Documents. Additional guidance is being developed and when available will be posted on the NQF website.

Use the tab or arrow (↓→) keys to move the cursor to the next field (or back ←↑). There are three types of response fields:

- drop-down menus - select one response;
- check boxes – check as many as apply; and
- text fields – you can copy and paste text into these fields or enter text; these fields are not limited in size, but in most cases, we ask that you summarize the requested information.

Please note that URL hyperlinks do not work in the form; you will need to type them into your web browser.

Be sure to answer all questions. Fields that are left blank will be interpreted as no or none. Information must be provided in this form. Attachments are not allowed except when specifically requested or to provide additional detail or source documents for information that is summarized in this form. If you have important information that is not addressed by the questions, they can be entered into item #48 near the end of the form.

For questions about this form, please contact the NQF Project Director listed in the corresponding call for measures.

	CONDITIONS FOR CONSIDERATION BY NQF
	Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards.
A (A)	*Public domain or Intellectual Property Agreement signed: IP Agreement signed and submitted (If no, do not submit)* *Template for the Intellectual Property Agreement is available at www.qualityforum.org under Core Documents.*
B (B)	*Measure steward/maintenance: Is there an identified responsible entity and process to maintain and update the measure on a schedule commensurate with clinical innovation, but at least every 3 years?* *Yes, information provided in contact section (If no, do not submit)*
C (C)	*Intended use: Does the intended use of the measure include BOTH public reporting AND quality improvement? Yes (If no, do not submit)*
D (D)	*Fully developed and tested: Is the measure fully developed AND tested? Yes, fully developed and tested (If not tested and no plans for testing within 24 months, do not submit)*

THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0

August 2008

	(for NQF staff use) NQF Review #: EC-232-08 NQF Project: National Voluntary Consensus Standards for Ambulatory Care Using Clinically Enriched Administrative Data
	MEASURE SPECIFICATIONS & DESCRIPTIVE INFORMATION
1	*Information current as of (date- MM/DD/YY): 06/15/09*
2	*Title of Measure: Diabetes with Hypertension or Proteinuria - Use of an ACE Inhibitor or ARB*
3	**Brief description of measure [1]:** Percentage of patients with diabetes and hypertension or proteinuria that have a current refill for an angiotensin converting enzyme inhibitor (ACE-I) or angiotensin receptor blocker (ARB)
4 (2a)	**Numerator Statement:** Patients with a current refill for an ACE-I or ARB **Time Window:** A drug day-supply that extends within 30 days of the measurement date **Numerator Details** (Definitions, codes with description): see attached
5 (2a)	**Denominator Statement:** All patients, 18-75 years of age, with diabetes and hypertension or a urine albumin/creatinine ratio >= 30 mg/g **Time Window:** 5 years **Denominator Details** (Definitions, codes with description): see attached
6 (2a, 2d)	**Denominator Exclusions:** Patients with contraindication to an ACE inhibitor or ARB, including pregnancy, prior angioedema, hypotension, hyperkalemia, rising creatinine, chronic kidney disease stage 4 or 5 (without dialysis), aortic stenosis, hypertrophic cardiomyopathy, multiple myeloma with treatment; gestational diabetes or polycystic ovarian syndrome; pancreas transplant **Denominator Exclusion Details** (Definitions, codes with description): see attached
7 (2a, 2h)	**Stratification** Do the measure specifications require the results to be stratified? No ► If "other" describe: **Identification of stratification variable(s):** **Stratification Details** (Definitions, codes with description):
8 (2a, 2e)	**Risk Adjustment** Does the measure require risk adjustment to account for differences in patient severity before the onset of care? No ► **If yes,** (select one) ► Is there a separate proprietary owner of the risk model? (select one) **Identify Risk Adjustment Variables:** **Detailed risk model:** attached ☐ **OR** Web page URL:
9 (2a)	**Type of Score:** Rate/proportion **Calculation Algorithm:** attached ☒ **OR** Web page URL: **Interpretation of Score** (*Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score*) Better quality = Higher score ► If "Other", please describe:

[1] Example of measure description: Percentage of adult patients with diabetes aged 18-75 years receiving one or more A1c test(s) per year.

10 (2a. 4a, 4b)

Identify the required data elements(e.g., primary diagnosis, lab values, vital signs)**:** ICD9, CPT, pharmacy claims, lab values

Data dictionary/code table attached ☒ **OR** Web page URL:

Data Quality (2a) *Check all that apply*

- ☒ Data are captured from an authoritative/accurate source (e.g., lab values from laboratory personnel)
- ☒ Data are coded using recognized data standards
- ☒ Method of capturing data electronically fits the workflow of the authoritative source
- ☐ Data are available in EHRs
- ☐ Data are auditable

11 (2a, 4b)

Data Source and Data Collection Methods *Identifies the data source(s) necessary to implement the measure specifications. Check all that apply*

- ☐ Electronic Health/Medical Record
- ☐ Electronic Clinical Database, Name:
- ☐ Electronic Clinical Registry, Name:
- ☒ Electronic Claims
- ☒ Electronic Pharmacy data
- ☒ Electronic Lab data
- ☐ Electronic source – other, Describe: personal health record data collection
- ☐ Paper Medical Record
- ☐ Standardized clinical instrument, Name:
- ☐ Standardized patient survey, Name:
- ☐ Standardized clinician survey, Name:
- ☐ Other, Describe: Telephonic data collection from nurse-delivered disease management program

Instrument/survey attached ☐ **OR** Web page URL:

12 (2a)

Sampling *If measure is based on a sample, provide instructions and guidance on sample size.*

Minimum sample size:

Instructions:

13 (2a)

Type of Measure: Process ► If "Other", please describe:

► If part of a composite or paired with another measure, please identify composite or paired measure

14 (2a)

Unit of Measurement/Analysis (*Who or what is being measured*) *Check all that apply.*

- ☒ Can be measured at all levels
- ☐ Individual clinician (e.g., physician, nurse)
- ☐ Group of clinicians (e.g., facility department/unit, group practice)
- ☐ Facility (e.g., hospital, nursing home)
- ☐ Integrated delivery system
- ☐ Health plan
- ☐ Community/Population
- ☐ Other (*Please describe*):

15 (2a)

Applicable Care Settings *Check all that apply*

- ☐ Can be used in all healthcare settings
- ☒ Ambulatory Care (office/clinic)
- ☐ Behavioral Healthcare
- ☒ Community Healthcare
- ☐ Dialysis Facility
- ☐ Emergency Department
- ☐ EMS emergency medical services
- ☒ Health Plan
- ☐ Home Health
- ☐ Hospice
- ☐ Hospital
- ☐ Long term acute care hospital
- ☒ Nursing home/ Skilled Nursing Facility (SNF)
- ☐ Prescription Drug Plan
- ☐ Rehabilitation Facility
- ☐ Substance Use Treatment Program/Center
- ☐ Other (*Please describe*):

IMPORTANCE TO MEASURE AND REPORT

Note: This is a threshold criterion. If a measure is not judged to be sufficiently important to measure and report, it will not be evaluated against the remaining criteria.

16 (1a)

Addresses a Specific National Priority Partners Goal *Enter the numbers of the specific goals related to this measure (see list of goals on last page)*: 2.1,2.2,6.1

17 (1a)

If not related to NPP goal, identify high impact aspect of healthcare (select one)

Summary of Evidence:

	Citations[2] for Evidence:
18 (1b)	**Opportunity for Improvement** *Provide evidence that demonstrates considerable variation, or overall poor performance, across providers.* **Summary of Evidence:** Diabetes is the leading cause of end-stage renal disease (KDOQI, 2007). Studies have demonstrated the underuse of ACE inhibitors and angiotensin receptor blockers in patients with diabetic kidney disease (Winkelmayer, 2005). In a report using data from Medicare and the Pennsylvania Pharmaceutical Assistance Contract for the Elderly Program, only 50.7% of diabetics with hypertension and/or proteinuria received these drugs. These findings are supported by additional clinical trials in patients with diabetic nephropathy which invariably demonstrate sub-par baseline use of these drugs. **Citations for Evidence:** K/DOQI (Kidney Disease Outcomes Quality Initiative) Clinical Practice Guidelines on Hypertension and Antihypertensive Agents in Chronic Kidney Disease. Am J Kidney Dis. 2004; 43:S65-S230. American Diabetes Association - Position Statement: Standards of Medical Care in Diabetes - 2007. Diabetes Care. 2007; 30:S4-S41
19 (1b)	**Disparities** *Provide evidence that demonstrates disparity in care/outcomes related to the measure focus among populations.* **Summary of Evidence:** There are significant disparities in the care of patients with chronic diseases. Diabetes mellitus is one of a few diseases that account for the majority of the socioeconomic and racial disparities in mortality (Wong, 2002). In reviewing the literature it is evident that diabetes mellitus and the associated comorbidities occur more frequently in certain populations. Harris et al. demonstrated an increased prevalence and severity of retinopathy in African Americans and Mexican Americans compared to non-Hispanic whites. In their study, Young et al. found that after adjustment for age, African Americans were more likely to have diabetic nephropathy and end-stage renal disease when compared to Caucasians. One study investigated the disparities in the treatment of patients who have diabetes mellitus, including the variation in performance measurements (Sequist, 2008). The worse outcomes in black patients was not related to receiving care from physicians who provide a lower quality of care; black patients experienced wose outcomes than white patients within the same physician panel. They concluded that efforts should be directed across all physicians, with special emphasis on delivering effective care to minority patients. **Citations for evidence:** American Diabetes Association (ADA): Standards of Medical Care. Diabetes Care 31 (Suppl. 1):S12-S54, 2008. Donald S. Fong, Lloyd Aiello, Thomas W. Gardner, George L. King, George Blankenship, Jerry D. Cavallerano, Fredrick L. Ferris, III, and Ronald Klein Retinopathy in Diabetes Diabetes Care 27 (Suppl. 1):S84 –S87, 2004. Harris MI, Klein R, Cowie CC, Rowland M, Byrd-Holt DD. Is the risk of diabetic retinopathy greater in non-Hispanic blacks and Mexican Americans than in non-Hispanic whites with type 2 diabetes? A U.S. population study. Diabetes Care. 1998;21(8):1230-1235. Mohamed Q, Gillies MC, Wong TY. Management of diabetic retinopathy: a systematic review. JAMA. 2007 Aug 22;298(8):902-16. Sequist TD, Fitzmaurice GM, Marshall R, Shaykevich S, Safran DG, Ayanian JZ. Physician performance and racial disparities in diabetes mellitus care. Arch Intern Med. 2008;168(11):1145-1151. Wong MD, Shapiro MF, Boscardin J, Ettner SL: Contributions of major disease to disparities in mortality. N Engl J Med 347:1585–1592, 2002.

[2] Citations can include, but are not limited to journal articles, reports, web pages (URLs).

	Young BA, Maynard C, Reiber G, Boyko EJ. Effects of ethnicity and nephropathy on lower-extremity amputation risk among diabetic veterans. Diabetes Care. 2003; 26(2):495-501.
20 (1c)	**If measuring an Outcome** Describe relevance to the national health goal/priority, condition, population, and/or care being addressed: **If not measuring an outcome, provide evidence supporting this measure topic and grade the strength of the evidence** *Summarize the evidence (including citations to source) supporting the focus of the measure as follows:* • Intermediate outcome – evidence that the measured intermediate outcome (e.g., blood pressure, Hba1c) leads to improved health/avoidance of harm or cost/benefit. • Process – evidence that the measured clinical or administrative process leads to improved health/avoidance of harm and if the measure focus is on one step in a multi-step care process, it measures the step that has the greatest effect on improving the specified desired outcome(s). • Structure – evidence that the measured structure supports the consistent delivery of effective processes or access that lead to improved health/avoidance of harm or cost/benefit. • Patient experience – evidence that an association exists between the measure of patient experience of health care and the outcomes, values and preferences of individuals/ the public. • Access – evidence that an association exists between access to a health service and the outcomes of, or experience with, care. • Efficiency– demonstration of an association between the measured resource use and level of performance with respect to one or more of the other five IOM aims of quality. **Type of Evidence** *Check all that apply* ☒ Evidence-based guideline ☐ Quantitative research studies ☐ Meta-analysis ☐ Qualitative research studies ☐ Systematic synthesis of research ☐ Other (*Please describe*): **Overall Grade for Strength of the Evidence**[3] (*Use the USPSTF system, or if different, also describe how it relates to the USPSTF system)***:** Authors graded the recommendation as strong. This would be most consistent with a USPSTF grade A. **Summary of Evidence** (*provide guideline information below*)**:** ACE inhibitors and ARBs are effective in slowing the progression of kidney disease with microalbuminuria due to type 1 and type 2 diabetes (Strong). ACE inhibitors and ARBs lower urine albumin excretion, slow the rise in albumin excretion and delay the progression from microalbuminuria to macroalbuminuria in kidney disease due to type 1 and type 2 diabetes (Table 108). Follow-up in these studies was generally in the range of 2 to 4 years, so in most studies GFR was stable and there was no difference in GFR decline between the ACE inhibitor or ARB groups and control groups. Because of the long duration of follow-up necessary to ascertain an effect of interventions on GFR decline in a study of patients with microalbuminuria, and the proven beneficial effect of ACE inhibitors and ARBs in later stages of diabetic kidney disease (see later in Guideline 8), the Work Group considered that these studies provided "strong" evidence, even though they are based on a surrogate endpoint. Because of the early stage of kidney disease, some patients in these studies were not hypertensive. Consequently, patients in the ACE inhibitor or ARB group had lower mean blood pressure during follow-up than patients in the control group. In some studies, the beneficial effect of ACE inhibitors or ARBs appeared greater than the difference in mean follow-up blood pressure or persisted after adjustment for follow-up blood pressure in multiple regression analysis, suggesting that the benefit is due to mechanisms

[3]The strength of the body of evidence for the specific measure focus should be systematically assessed and rated, e.g., USPSTF grading system www.ahrq.gov/clinic/uspstmeth.htm: A - The USPSTF recommends the service. There is high certainty that the net benefit is substantial. B - The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial. C - The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is at least moderate certainty that the net benefit is small. Offer or provide this service only if other considerations support the offering or providing the service in an individual patient. D - The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. I - The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

	in addition to the antihypertensive effect. An individual patient meta-analysis of 646 patients in 10 randomized clinical trials confirmed these results. Consequently, the Work Group concluded that ACE inhibitors and ARBs are preferred agents for diabetic kidney disease with microalbuminuria and should be prescribed for patients with or without hypertension. **Citations for Evidence:** K/DOQI (Kidney Disease Outcomes Quality Initiative) Clinical Practice Guidelines on Hypertension and Antihypertensive Agents in Chronic Kidney Disease. Am J Kidney Dis. 2004; 43:S65-S230.
21 (1c)	**Clinical Practice Guideline** *Cite the guideline reference; quote the specific guideline recommendation related to the measure and the guideline author's assessment of the strength of the evidence; and summarize the rationale for using this guideline over others.* **Guideline Citation:** K/DOQI (Kidney Disease Outcomes Quality Initiative) Clinical Practice Guidelines on Hypertension and Antihypertensive Agents in Chronic Kidney Disease. Am J Kidney Dis. 2004; 43:S65-S230. American Diabetes Association - Position Statement: Standards of Medical Care in Diabetes - 2007. Diabetes Care. 2007; 30:S4-S41. Standards of Medical Care in Diabetes—2008. DIABETES CARE, VOLUME 31, SUPPLEMENT 1, JANUARY 2008 **Specific guideline recommendation:** ACE inhibitors and ARBs are effective in slowing the progression of kidney disease with microalbuminuria due to type 1 and type 2 diabetes (Strong). ACE inhibitors and ARBs lower urine albumin excretion, slow the rise in albumin excretion and delay the progression from microalbuminuria to macroalbuminuria in kidney disease due to type 1 and type 2 diabetes (Table 108). Follow-up in these studies was generally in the range of 2 to 4 years, so in most studies GFR was stable and there was no difference in GFR decline between the ACE inhibitor or ARB groups and control groups.Because of the long duration of follow-up necessary to ascertain an effect of interventions on GFR decline in a study of patients with microalbuminuria, and the proven beneficial effect of ACE inhibitors and ARBs in later stages of diabetic kidney disease (see later in Guideline 8), the Work Group considered that these studies provided "strong" evidence, even though they are based on a surrogate endpoint. Pharmacologic therapy for patients with diabetes and hypertension should be treated with a regimen that includes either an ACE inhibitor or an angiotensin receptor blocker (ARB). If one class is not tolerated, the other should be substituted. If needed to achieve blood pressure targets, a thiazide diuretic should be added to those with an estimated glomerular filtration rate (GFR) (see below) >50 ml/min per 1.73 m2 and a loop diuretic for those with an estimated GFR <50 ml/min per 1.73 m2. (E) **Guideline author's rating of strength of evidence** (*If different from USPSTF, also describe it and how it relates to USPSTF)***:** Authors graded the recommendation in patients with proteinuria as strong. This would be most consistent with a USPSTF grade A. Guidelines from the ADA regarding diabetics with hypertension are based on expert opinion. **Rationale for using this guideline over others:** Several studies have documented the benefit of ACE inhibitors and ARBs in the management of proteinuric renal disease, including diabetic nephropathy. The NKF and ADA guidelines summarize their findings and provide a convincing argument for the use of these drugs. In addition, our experience sending clinical alerts for patients with proteinuric kidney disease that are not receiving ACE inhibitors or ARBs suggests that guideline implementation remains relatively low.
22 (1c)	**Controversy/Contradictory Evidence** *Summarize any areas of controversy, contradictory evidence, or contradictory guidelines and provide citations.* **Summary:** **Citations:**
23 (1)	**Briefly describe how this measure (as specified) will facilitate significant gains in healthcare quality related to the specific priority goals and quality problems identified above:** Inhibitors of the renin-angiotensin-aldosterone system slow the progression proteinuria renal disease and may not only decrease

	the incidence of end-stage renal disease and dialysis, but also decrease cardiovascular mortality. The use of these drugs is often avoided because of misplaced concerns about accelerating renal failure and other drug side effects. Physicians and patients should be encouraged to use these drugs appropriately.
	SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES
	Note: Testing and results should be summarized in this form. However, additional detail and reports may be submitted as supplemental information or provided as a web page URL. If a measure has not been tested, it is only potentially eligible for time-limited endorsement.
24	**Supplemental Testing Information:** attached ☐ **OR** Web page URL:
25 (2b)	**Reliability Testing** **Data/sample:** **Analytic Method:** **Testing Results:**
26 (2c)	**Validity Testing** **Data/sample:** **Analytic Method:** **Testing Results:**
27 (2d)	**Measure Exclusions** *Provide evidence to justify exclusion(s) and analysis of impact on measure results during testing.* **Summary of Evidence supporting exclusion(s):** **Citations for Evidence:** **Data/sample:** **Analytic Method:** **Testing Results:**
28 (2e)	**Risk Adjustment Testing** *Summarize the testing used to determine the need (or no need) for risk adjustment and the statistical performance of the risk adjustment method.* **Data/sample:** **Analytic Method:** **Testing Results:** ►**If outcome or resource use measure not risk adjusted, provide rationale:**
29 (2g)	**Testing comparability of results when more than 1 data method is specified** (*e.g., administrative claims or chart abstraction*) **Data/sample:** **Analytic Method:** **Results:**
30 (2f)	**Provide Measure Results from Testing or Current Use** Results from testing **Data/sample:** We measured a population of 459,196 commercially insured members.

	Methods to identify statistically significant and practically/meaningfully differences in performance: Compliance to the performance measure is measured using an analysis of the claims data; in this case looking for evidence of an ACE inhibitor or ARB. In addition, where appropriate we analyze patient data collected either from the patient's PHR or during a disease management program. **Results:** We found that of the 16,503 members who satisfied the denominator, 14,215 were in the numerator, indicating a compliance rate of 86%.
31 (2h)	**Identification of Disparities** ►If measure is stratified by factors related to disparities (i.e. race/ethnicity, primary language, gender, SES, health literacy), **provide stratified results:** ►If disparities have been reported/identified, but measure is not specified to detect disparities, provide rationale:
	USABILITY
32 (3)	*Current Use In use If in use, how widely used Health plan or sytem ► If "other," please describe:* ☐ *Used in a public reporting initiative, name of initiative:* *Sample report attached* ☐ *OR Web page URL:*
33 (3a)	**Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **Data/sample:** Administrative claims database from health plans; lab results data **Methods:** The performance measure is similar in message to a clinical alert that has been operational since 2001. Compliance to the clinical alert is measured using an analysis of subsequent claims, in this case the appearance of pharmacy claims for an ACE inhibitor or ARB. In addition, a feedback tool accompanies every clinical alert message, and includes options indicating agreement or disagreement with the message. **Results:** In practice, fewer than 1% of the respondents disagreed with the medical literature, and 37% show objective evidence of compliance.
34 (3b, 3c)	**Relation to other NQF-endorsed™ measures** ►Is this measure similar or related to measure(s) already endorsed by NQF (on the same topic or the same target population)? *Measures can be found at www.qualityforum.org under Core Documents.* *Check all that apply* ☐ Have not looked at other NQF measures ☐ Other measure(s) on same topic ☐ Other measure(s) for same target population ☒ No similar or related measures **Name of similar or related NQF-endorsed™ measure(s):** **Are the measure specifications harmonized with existing NQF-endorsed™ measures?** (select one) ►If not fully harmonized, provide rationale: **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:**
	FEASIBILITY
35 (4a)	*How are the required data elements generated? Check all that apply* ☒ *Data elements are generated concurrent with and as a byproduct of care processes during care delivery (e.g., blood pressure or other assessment recorded by personnel conducting the assessment)* ☐ *Data elements are generated from a patient survey (e.g., CAHPS)* ☒ *Data elements are generated through coding performed by someone other than the person who*

	obtained the original information (e.g., DRG or ICD-9 coding on claims) ☒ *Other, Please describe: Data obtained through electronic personal health records and telephonic, nurse-driven disease management programs*
36 (4b)	*Electronic Sources All data elements* ►*If all data elements are not in electronic sources, specify the near-term path to electronic collection by most providers:* ►*Specify the data elements for the electronic health record: ICD9, CPT, NDC and LOINC codes*
37 (4c)	*Do the specified exclusions require additional data sources beyond what is required for the other specifications? No* ►*If yes, provide justification:*
38 (4d)	*Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure: Generally, the use of claims data has inherent errors and inaccuracies related to incorrect coding, or missing data, which can result in less specificity in the definition of denominator and /or the numerator. To minimize these errors and inaccuracies, we use clinically enriched data (laboratory results, medication lists) to augment the claims data. In addition where possible, to corroborate the claims data, we solicit feedback from both providers via a feedback form and patients from a personal health record or from a disease management program.* *We do not anticipate significant unintended consequences from the implementation of the measure. Our measures are all developed from evidence-based literature or from clinical guidelines and are designed to encourage appropriate care of the patient.* *Describe how could these potential problems be audited: The inclusion of patient-derived data from a personal health record or through a disease management program may be used to confirm the presence or absence of a medication; ultimately the data sources may be tested against a sample of medical charts.* *Did you audit for these potential problems during testing? No If yes, provide results:*
39 (4e)	*Testing feasibility Describe what have you learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues: Multiple sources of corroborating clinical data are necessary to correctly identify patients in the denominator. Earlier testing efforts using specifications similar to HEDIS were more sensitive yet nonspecific. The additional of supporting information for certain diagnostic conditions (e.g., diabetic medications and supplies in addition to ICD9 codes for diabetes) significantly decreased the number identified in the denominator, yet the analysis led to a much higher compliance rate, likely because of the exclusion of fewer false positives in the denominator.*
	CONTACT INFORMATION
40	*Web Page URL for Measure Information Describe where users (implementers) should go for more details on specifications of measures, or assistance in implementing the measure.* *Web page URL: www.activehealth.net*
41	**Measure Intellectual Property Agreement Owner Point of Contact** **First Name:** Madhavi **MI:** **Last Name:** Vemireddy **Credentials (MD, MPH, etc.):** MD **Organization:** ActiveHealth Management **Street Address:** 102 Madison Avenue **City:** New York **State:** NY **ZIP:** 10016 **Email:** mvemireddy@activehealth.net **Telephone:** 212-651-8200 ext:
42	**Measure Submission Point of Contact** **If different than IP Owner Contact** **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):** **Organization:** **Street Address:** **City:** **State:** **ZIP:**

	Email: **Telephone:** ext:
43	**Measure Developer Point of Contact** **If different than IP Owner Contact** **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):** **Organization:** **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext:
44	**Measure Steward Point of Contact** **If different than IP Owner Contact** *Identifies the organization that will take responsibility for updating the measure and assuring it is consistent with the scientific evidence and current coding schema; the steward of the measure may be different than the developer.* **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):** **Organization:** **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext
	ADDITIONAL INFORMATION
45	**Workgroup/Expert Panel involved in measure development** No workgroup or panel used ►If workgroup used, describe the members' role in measure development: ►Provide a list of workgroup/panel members' names and organizations:
46	*Measure Developer/Steward Updates and Ongoing Maintenance* *Year the measure was first released: 2001* *Month and Year of most recent revision: 02/2009* *What is the frequency for review/update of this measure? Biennially* *When is the next scheduled review/update for this measure? 2011*
47	**Copyright statement/disclaimers:** This information, including any attachments hereto, is the sole, exclusive, proprietary and confidential property of Active Health Management, Inc., and is for the exclusive use of The National Quality Forum. Any use, copying, disclosure, dissemination or distribution by anyone other than the National Quality Forum is strictly prohibited.
48	**Additional Information:**
49	**I have checked that the submission is complete and any blank fields indicate that no information is provided.** ☒
50	**Date of Submission** (*MM/DD/YY*)**:** 02/09/09

PATIENT & FAMILY ENGAGEMENT

PRIORITY STATEMENT: Engage Patients and Their Families in Managing Their Health and Making Decisions About Their Care

1.1. All providers will routinely solicit and publicly report on their patients' perspectives of care

1.2. All providers will work collaboratively with their patients to assist them in making informed decisions about treatment options consistent with their values and preferences

POPULATION HEALTH

PRIORITY STATEMENT: IMPROVE THE HEALTH OF THE U.S. POPULATION

2.1. The population will be up to date on all high-priority age- and gender-appropriate evidence-based clinical preventive services

2.2. The population will receive recommended evidence-based interventions to improve targeted healthy lifestyle behaviors

2.3. All communities will demonstrate a 10% improvement in their community index of health

2.4. Americans will have all recommended high priority healthy lifestyle behaviors under control

SAFETY

PRIORITY STATEMENT: IMPROVE THE SAFETY OF THE U.S. HEALTH CARE SYSTEM

3.1. All providers will drive all preventable healthcare-associated infections (HAI) to zero

3.2. All providers will drive the incidence of preventable NQF Serious Reportable Events (SRE) to zero

3.3. All hospitals will reduce preventable and premature mortality rates to best-in-class

3.4. All hospitals and their community partners will reduce 30-day mortality rates following hospitalization for select conditions to best-in-class

PALLIATIVE CARE

PRIORITY STATEMENT: GUARANTEE APPROPRIATE AND COMPASSIONATE CARE FOR PATIENTS WITH LIFE-LIMITING ILLNESSES

4.1. All providers will identify, document, and effectively treat physical symptoms (e.g. pain, shortness of breath, constipation, others) at levels acceptable to patients with a life-limiting illness

4.2. All providers will effectively address the psychosocial and spiritual needs of patients with life-limiting illnesses and their families according to their preferences

4.3. All eligible patients will receive high quality palliative care and hospice services

CARE COORDINATION

PRIORITY STATEMENT: ENSURE PATIENTS RECEIVE WELL-COORDINATED CARE ACROSS ALL PROVIDERS, SETTINGS, AND LEVELS OF CARE

5.1. All providers will accurately and completely reconcile medications across the continuum of care (i.e. admission, transfer within and between care providers, discharge, and outpatient appointments) and ensure communication with the next provider of services

5.2. All inpatient and outpatient providers will assess the patient's perspective of the coordination of their care using a validated care coordination survey tool

5.3. All providers will reduce 30-day all-cause readmission rates resulting from poorly coordinated care to best-in-class

5.4. All providers will reduce preventable emergency department (i.e. those that could be avoided with timely access to primary care) visits resulting from poorly coordinated care by 50%

PATIENT-FOCUSED CARE

PRIORITY STATEMENT: GUARANTEE HIGH VALUE CARE ACROSS ACUTE AND CHRONIC EPISODES

6.1. All patients will receive high-value care over the course of their acute or chronic illness

OVERUSE

PRIORITY STATEMENT: ELIMINATE WASTE WHILE ENSURING THE DELIVERY OF APPROPRIATE CARE

7.1. Reduce wasteful and inappropriate care for the top ten targeted areas by 50%

PERFORMANCE MEASURE RULE:
Diabetes with Hypertension or Proteinuria - Use of an ACE Inhibitor or ARB

DENOMINATOR

All of the Following are correct:

1. If Diabetes Adult Validation is confirmed for the member (see below)
2. Age between 18 and 75
3. One of the Following is correct:
    a. If Hypertension Adult Validation is Confirmed for the member (see below)
    b. Presence of At Least 1 MICROALBUMIN Labs Result Value > 29 in the past 12 months
    c. Presence of Patient Data Confirming At Least 1 PDD- MICROALBUMIN VALUE Result > 29 in the past 12 months

DENOMINATOR EXCLUSIONS

One of the following is correct:

1. If ACE Contraindications is confirmed for the member (see below)
2. Presence of At Least 1 PREGNANCY Diagnosis in the past 12 months overlapping with the MICROALBUMIN VALUE Lab

NUMERATOR

All of the Following are correct:

1. Denominator is true
2. One of the Following is correct:
    a. Presence of a current refill for ANTIHYPE/ARB-ACEI
    b. Presence of Patient Data Confirming at least 1 ANTIHYPE/ARB-ACEI Drug in the past 6 months

Diabetes Adult Validation

All of the following are correct:

1. Patient age ≥18 years

2. One of the following is correct:

    a. Presence of patient data confirming at least 1 PDD- DIABETES in the past 24 months

    b. Presence of at least 4 claims DIABETES MELLITUS diagnosis in the past 12 months with at least a 3 month separation between claims

    c. All of the following are correct:

        i. Presence of at least 1 DIABETES MELLITUS diagnosis in the past 5 years beginning at least 1 month in the past

        ii. One of the following is correct:

            1. Presence of at least 2 refills DM MEDS AND SUPPLIES exists in the past 12 months

            2. Presence of at least 2 DM MEDS AND SUPPLIES (HCPCS) procedure in the past 12 months

            3. Presence of at least 1 INSULIN THERAPY (HCPCS) procedure in the past 12 months

            4. Presence of at least 1 HBA1C VALUE > 7.5 in the past 12 months

Diabetes Validation Exclusion

One of the following is correct:

1. Presence of 2 STEROID-INDUCED DM diagnosis in the past 12 months
2. All of the following are correct:
    - Presence of at least 2 GESTATIONAL DM/POLYCYSTIC OVARIES diagnosis in the past 12 months
    - Female gender

ACE Contraindications Validation

One of the following is correct:

1. Presence of at least 1 ACEI/CONTRAINDICATIONS diagnosis anytime in the past
2. Presence of at least 1 HYPERPOTASSEMIA diagnosis in the past 6 months
3. Presence of at least 2 HYPERTROPHIC CARDIOMYOPATHY diagnosis in the past 12 months
4. Presence of at least 1 POTASSIUM lab value > 5.5 in the past 6 months
5. Presence of at least 3 AORTIC STENOSIS diagnosis in the past 6 months
6. Presence of at least 2 HYPOTENSION diagnosis in the past 6 months
7. Pregnancy exclusion validation is confirmed for the member (see below).
8. CKD stage 4 validation is confirmed for the member (see below).
9. Presence of a refill of HYDRALAZINE after a prior ANTIHYPE/ARB-ACEI
10. Presence of at least 2 consecutive CREATININE lab result % change increase > 20 in the past 4 months
11. All of the following are correct:
    a. Presence of at least 2 MULTIPLE MYELOMA diagnosis in the past 12 months
    b. Presence of at least 1 refill CHEMOTHERAPY exists in the past 12 months
12. Presence of patient data confirming PDD- PREGNANCY PLANNING in the past 6 months
13. Presence of patient data confirming PDD- SYSTOLIC BP result < 100 in the past 3 months
14. Presence of patient data confirming PDD- DIASTOLIC BP result < 60 in the past 3 months
15. Presence of a current refill for ALISKIREN
16. Presence of patient data confirming ALISKIREN drug in the past 6 months
17. Presence of at least 1 PREGNANCY PROCREATIVE MNG (ICD9) diagnosis in the past 6 months
18. Presence of at least 2 CKD STAGE 5 diagnosis in the past 12 months in the absence of DIALYSIS CHRONIC (CPT) procedure in the past 12 months

Hypertension Validation

All of the following are correct:

1. Patient age >/= 18 years
2. One of the following is correct:
    a. Presence of PDD- HYPERTENSION in the past 24 months
    b. Presence of at least 4 HYPERTENSION diagnosis at least 3 month apart in the past 24 months
    c. All of the following are correct:
        i. Presence of at least 2 HYPERTENSION diagnosis at least 1 month apart in the past 24 months
        ii. One of the following is correct:
            1. Presence of at least 1 refill for ANTIHYPE/ALL in the past 6 months
            2. Presence of patient data confirming at least 1 refill for ANTIHYPE/ALL in the past 6 months
            3. Presence of AMBULATORY (24H) BP MONITORING in past 24 months

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Pregnancy Exclusion Validation

a. One of the following is correct:
    a. Presence of At Least 1 HCG (LOINC) Labs Result Value > 100 in the past 6 months
    b. Presence of Patient Data Confirming At Least 1 PDD- PREGNANCY in the past 6 months
    c. Presence of At Least 1 PREGNANCY Diagnosis in the past 6 months
    d. Presence of At Least 1 PREGNANCY RELATED PROCEDURE Procedure in the past 6 months
    e. Presence of At Least 1 PREGNANCY EXCLUSION Diagnosis in the past 6 Months

b. Exclusion - If One of the Following is correct

a. Presence of At Least 1 DELIVERY AND ABORTION (ICD9) Diagnosis in the past 3 months
b. Presence of At Least 1 HYSTERECTOMY Procedure in the past 3 months
c. Presence of At Least 1 DELIVERY AND ABORTION (CPT) Procedure in the past 3 months
d. Presence of At Least 1 Refill UTEROTONICS Exists in the past 3 months
e. Presence of At Least 1 NONVIABLE PREGNANCY Diagnosis in the past 3 months

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CKD Stage 3 Validation

One of the following is correct:

1. Presence of at least 2 CKD STAGE 3 diagnosis in the past 12 months at least 3 months apart

2. All of the following are correct:

a. Presence of at least 2 CKD – NOS diagnosis in the past 12 months at least 3 months apart

b. Presence of at least 1 result for creatinine clearance between 30 and 59 in the past

c. If patient age >/= 18 years

CKD Stage 3 Validation Exclusion

One of the following is correct:

1. Presence of at least 1 TRANSPLANT RENAL (CPT) procedure in the past 12 months

2. CKD Stage 5 validation is confirmed for the member (see below)

3. Presence of a current refill for CALCIMIMETICS

4. CKD Stage 4 validation is confirmed for the member (see below)

CKD Stage 4 Validation

One of the following is correct:

1. Presence of at least 2 CKD STAGE 4 diagnosis in the past 12 months at least 3 months apart

2. All of the folllowing are correct:

    a. Presence of at least 2 CKD – NOS diagnosis in the past 12 months at least 3 months apart

    b. Presence of at least 1 result for creatinine clearance between 15 and 29 in the past

    c. If patient age >/= 18 years

CKD Stage 4 Validation Exclusion

One of the following is correct:

1. Presence of at least 1 TRANSPLANT RENAL (CPT) procedure in the past 12 months

2. CKD Stage 5 validation is confirmed for the member (see below)

3. Presence of a current refill for CALCIMIMETICS

CKD Stage 5 Validation

One of the following is correct:

1. Presence of at least 2 CKD STAGE 5 diagnosis in the past 12 months at least 3 months apart

2. All of the following are correct:

    a. Presence of at least 2 CKD – NOS diagnosis in the past 12 months at least 3 months apart

    b. Presence of at least 1 result for creatinine clearance between 0.1 And 14 in the past

    c. If patient age >/= 18 years

3. Presence of at least 2 DIALYSIS CHRONIC (CPT) procedure in the past 12 months

4. Presence of patient data confirming at least 1 PDD- DIALYSIS in the past 12 months

CKD Stage 5 Validation Exclusion

The following is correct:

Presence of at least 1 TRANSPLANT RENAL (CPT) procedure in the past 12 months

Note: A 3 month time window has been added to certain timeframes in order to account for the inherent delay in the acquisition of administrative claims data.

Note: A current refill is defined as a refill in which the day supply of a drug extends into the end of the measurement window plus a grace period of 30 days.

THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0

August 2008

The measure information you submit will be shared with NQF's Steering Committees and Technical Advisory Panels to evaluate measures against the NQF criteria of importance to measure and report, scientific acceptability of measure properties, usability, and feasibility. Four conditions (as indicated below) must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards. Not all acceptable measures will be strong—or equally strong—among each set of criteria. The assessment of each criterion is a matter of degree; however, all measures must be judged to have met the first criterion, importance to measure and report, in order to be evaluated against the remaining criteria. References to the specific measure evaluation criteria are provided in parentheses following the item numbers. Please refer to the *Measure Evaluation Criteria* for more information at *www.qualityforum.org* under Core Documents. Additional guidance is being developed and when available will be posted on the NQF website.

Use the tab or arrow (↓→) keys to move the cursor to the next field (or back ←↑). There are three types of response fields:

- drop-down menus - select one response;
- check boxes – check as many as apply; and
- text fields – you can copy and paste text into these fields or enter text; these fields are not limited in size, but in most cases, we ask that you summarize the requested information.

Please note that URL hyperlinks do not work in the form; you will need to type them into your web browser.

Be sure to answer all questions. Fields that are left blank will be interpreted as no or none. Information must be provided in this form. Attachments are not allowed except when specifically requested or to provide additional detail or source documents for information that is summarized in this form. If you have important information that is not addressed by the questions, they can be entered into item #48 near the end of the form.

For questions about this form, please contact the NQF Project Director listed in the corresponding call for measures.

	CONDITIONS FOR CONSIDERATION BY NQF
	Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards.
A (A)	*Public domain or Intellectual Property Agreement signed: IP Agreement signed and submitted (If no, do not submit)* *Template for the Intellectual Property Agreement is available at www.qualityforum.org under Core Documents.*
B (B)	*Measure steward/maintenance: Is there an identified responsible entity and process to maintain and update the measure on a schedule commensurate with clinical innovation, but at least every 3 years?* *Yes, information provided in contact section (If no, do not submit)*
C (C)	*Intended use: Does the intended use of the measure include BOTH public reporting AND quality improvement? Yes (If no, do not submit)*
D (D)	*Fully developed and tested: Is the measure fully developed AND tested? Yes, fully developed and tested (If not tested and no plans for testing within 24 months, do not submit)*

THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0

August 2008

	(for NQF staff use) NQF Review #: EC-262-08 NQF Project: National Voluntary Consensus Standards for Ambulatory Care Using Clinically Enriched Administrative Data
	MEASURE SPECIFICATIONS & DESCRIPTIVE INFORMATION
1	*Information current as of (date- MM/DD/YY): 06/26/09*
2	*Title of Measure: Diabetes and Elevated HbA1C – Use of Diabetes Medications*
3	**Brief description of measure [1]:** Percentage of patients 18- 75 years with diabetes and an elevated HbA1c that are receiving diabetic treatment (e.g., Metformin)
4 (2a)	**Numerator Statement:** Patients with a refill for diabetic medications **Time Window:** 12 months **Numerator Details** (Definitions, codes with description): see attached
5 (2a)	**Denominator Statement:** Patients 18- 75 years with diabetes and an elevated HbA1c >/=8 **Time Window:** 5 years **Denominator Details** (Definitions, codes with description): see attached
6 (2a, 2d)	**Denominator Exclusions:** Patients with type 1 diabetes, gestational diabetes; patients with a contraindication to metformin use such as chronic kidney disease, liver disease, acidosis, hypoxemia, severe heart failure General exclusions: • Evidence of metastatic disease or active treatment of malignancy (chemotherapy or radiation therapy) in the last 6 months; • Patients who have been in a skilled nursing facility in the last 3 months **Denominator Exclusion Details** (Definitions, codes with description):
7 (2a, 2h)	**Stratification** Do the measure specifications require the results to be stratified? No ► If "other" describe: **Identification of stratification variable(s):** **Stratification Details** (Definitions, codes with description):
8 (2a, 2e)	**Risk Adjustment** Does the measure require risk adjustment to account for differences in patient severity before the onset of care? No ► **If yes,** (select one) ► Is there a separate proprietary owner of the risk model? (select one) **Identify Risk Adjustment Variables:** **Detailed risk model:** attached ☐ **OR** Web page URL:
9 (2a)	**Type of Score:** Rate/proportion **Calculation Algorithm:** attached ☒ **OR** Web page URL: **Interpretation of Score** (*Classifies interpretation of score according to whether better quality is*

[1] Example of measure description: Percentage of adult patients with diabetes aged 18-75 years receiving one or more A1c test(s) per year.

	associated with a higher score, a lower score, a score falling within a defined interval, or a passing score) Better quality = Higher score ► If "Other", please describe:
10 (2a. 4a, 4b)	**Identify the required data elements**(e.g., primary diagnosis, lab values, vital signs)**:** ICD9, CPT, NDC, patient-derived data from a disease management nurse, a personal health record or health risk assessment **Data dictionary/code table** attached ☒ **OR** Web page URL: **Data Quality** (2a) *Check all that apply* ☒ Data are captured from an authoritative/accurate source (e.g., lab values from laboratory personnel) ☒ Data are coded using recognized data standards ☒ Method of capturing data electronically fits the workflow of the authoritative source ☐ Data are available in EHRs ☐ Data are auditable
11 (2a, 4b)	**Data Source and Data Collection Methods** *Identifies the data source(s) necessary to implement the measure specifications. Check all that apply* ☐ Electronic Health/Medical Record ☐ Electronic Clinical Database, Name: ☐ Electronic Clinical Registry, Name: ☒ Electronic Claims ☒ Electronic Pharmacy data ☒ Electronic Lab data ☐ Electronic source – other, Describe: Personal health record data collection ☐ Paper Medical Record ☐ Standardized clinical instrument, Name: ☐ Standardized patient survey, Name: ☐ Standardized clinician survey, Name: ☐ Other, Describe: Telephonic data collection from nurse-delivered disease management program. Instrument/survey attached ☐ **OR** Web page URL:
12 (2a)	**Sampling** *If measure is based on a sample, provide instructions and guidance on sample size.* **Minimum sample size:** **Instructions:**
13 (2a)	**Type of Measure:** Process ► If "Other", please describe: ► If part of a composite or paired with another measure, please identify composite or paired measure
14 (2a)	**Unit of Measurement/Analysis** (*Who or what is being measured*) *Check all that apply.* ☒ Can be measured at all levels ☐ Individual clinician (e.g., physician, nurse) ☐ Group of clinicians (e.g., facility department/unit, group practice) ☐ Facility (e.g., hospital, nursing home) ☐ Integrated delivery system ☐ Health plan ☐ Community/Population ☐ Other (*Please describe*):
15 (2a)	**Applicable Care Settings** *Check all that apply* ☐ Can be used in all healthcare settings ☒ Ambulatory Care (office/clinic) ☐ Behavioral Healthcare ☒ Community Healthcare ☒ Dialysis Facility ☐ Emergency Department ☐ EMS emergency medical services ☒ Health Plan ☐ Home Health ☐ Hospice ☐ Hospital ☐ Long term acute care hospital ☒ Nursing home/ Skilled Nursing Facility (SNF) ☐ Prescription Drug Plan ☐ Rehabilitation Facility ☐ Substance Use Treatment Program/Center ☐ Other (*Please describe*):
	IMPORTANCE TO MEASURE AND REPORT
	Note: This is a threshold criterion. If a measure is not judged to be sufficiently important to measure and report, it will not be evaluated against the remaining criteria.
16 (1a)	**Addresses a Specific National Priority Partners Goal** *Enter the numbers of the specific goals related to this measure (see list of goals on last page)*: 2.2, 2.3, 6.1
17	**If not related to NPP goal, identify high impact aspect of healthcare** (select one)

(1a)	**Summary of Evidence:** **Citations[2] for Evidence:**
18 (1b)	**Opportunity for Improvement** *Provide evidence that demonstrates considerable variation, or overall poor performance, across providers.* **Summary of Evidence:** In the calendar year 2008, we identified 1442 diabetics with an elevated HbA1C who were not receiving metformin or any other diabetic treatment. Initiating Therapy: • The authors recognize that for most individuals with type 2 diabetes, lifestyle interventions fail to achieve or maintain metabolic goals, either because of failure to lose weight, weight regain, progressive disease or a combination of factors. • Therefore, our consensus is that metformin therapy should be initiated concurrent with lifestyle intervention at diagnosis. • Metformin is recommended as the initial pharmacologic therapy, in the absence of specific contraindications, for its effect on glycemia, absence of weight gain or hypoglycemia, generally low level of side effects, high level of acceptance, and relatively low cost. • Metformin treatment should be titrated to its maximally effective dose over 1–2 months, as tolerated (Table 2). Rapid addition of other glucose-lowering medications should be considered in the setting of persistent symptomatic hyperglycemia. **Citations for Evidence:** Standards of Medical Care in Diabetes—2007. DIABETES CARE, VOLUME 30, SUPPLEMENT 1, JANUARY 2007
19 (1b)	**Disparities** *Provide evidence that demonstrates disparity in care/outcomes related to the measure focus among populations.* **Summary of Evidence:** First and foremost, diabetes must be acknowledged as a public health problem, one that affects all groups of all ages and that has reached epidemic proportions. A recent report from the Heart Outcomes Prevention Evaluation Study indicates that the development of much of type 2 diabetes and its complications can be delayed or even totally prevented.52 Treatment and prevention efforts should be approached not only on the level of an individual health problem but, even more, as a public health issue.53,54 Community interventions, including early screening and lifestyle change, are paramount and must be culturally appropriate. Second, effective treatment and prevention programs must become standard clinical practice. Intensive diabetes management and improved glycemic control are the keys to minimizing the impact of diabetes and would lead to fewer medical costs, lower rates of complications, and greatly reduced mortality as a result of the disease.52 It has been noted that a reduction of just 10% in the average blood glucose levels of all diabetics would result in a 40% decrease in the rate of diabetic complications and associated health care costs.55 Indeed, intensive therapy for diabetes has been shown to reduce the occurrence of retinopathy and blindness by over 40%, lower-body amputations by over 40%, and end-stage renal disease by over 70%.56 Despite the development of effective treatment and preventive programs, however, evidence suggests that they are not widely used in daily clinical practice.57–59 Non-White culturally diverse groups and women are at particularly high risk for poor glycemic control resulting from less than adequate preventive care services.2,53 Both of these groups are also less likely to engage in adequate self-care practices, particularly selfmonitoring of blood glucose levels. **Citations for evidence:** RURAL HEALTH AND WOMEN OF COLOR Diabetes, Diversity, and Disparity: What Do We Do With the Evidence? Sandra A. Black, PhD April 2002, Vol 92, No. 4 | American Journal of Public Health 543-548
20 (1c)	**If measuring an Outcome** Describe relevance to the national health goal/priority, condition, population, and/or care being addressed:

[2] Citations can include, but are not limited to journal articles, reports, web pages (URLs).

If not measuring an outcome, provide evidence supporting this measure topic and grade the strength of the evidence

Summarize the evidence (including citations to source) supporting the focus of the measure as follows:

- Intermediate outcome – evidence that the measured intermediate outcome (e.g., blood pressure, Hba1c) leads to improved health/avoidance of harm or cost/benefit.
- Process – evidence that the measured clinical or administrative process leads to improved health/avoidance of harm and
  if the measure focus is on one step in a multi-step care process, it measures the step that has the greatest effect on improving the specified desired outcome(s).
- Structure – evidence that the measured structure supports the consistent delivery of effective processes or access that lead to improved health/avoidance of harm or cost/benefit.
- Patient experience – evidence that an association exists between the measure of patient experience of health care and the outcomes, values and preferences of individuals/ the public.
- Access – evidence that an association exists between access to a health service and the outcomes of, or experience with, care.
- Efficiency– demonstration of an association between the measured resource use and level of performance with respect to one or more of the other five IOM aims of quality.

Type of Evidence *Check all that apply*

☒ Evidence-based guideline	☐ Quantitative research studies
☐ Meta-analysis	☐ Qualitative research studies
☐ Systematic synthesis of research	☐ Other (*Please describe*):

Overall Grade for Strength of the Evidence[3] (*Use the USPSTF system, or if different, also describe how it relates to the USPSTF system)*: The recommendation is based on a consensus statement from the American Diabetes Association and the European Association for the Study of Diabetes. This would be most consistent with a USPSTF grade A.

Summary of Evidence (*provide guideline information below*)**:**

Approach to Treatment – Type 2

Initiating Therapy:

- The authors recognize that for most individuals with type 2 diabetes, lifestyle interventions fail to achieve or maintain metabolic goals, either because of failure to lose weight, weight regain, progressive disease or a combination of factors.
- Therefore, our consensus is that metformin therapy should be initiated concurrent with lifestyle intervention at diagnosis.
- Metformin is recommended as the initial pharmacologic therapy, in the absence of specific contraindications, for its effect on glycemia, absence of weight gain or hypoglycemia, generally low level of side effects, high level of acceptance, and relatively low cost.
- Metformin treatment should be titrated to its maximally effective dose over 1–2 months, as tolerated (Table 2). Rapid addition of other glucose-lowering medications should be considered in the setting of persistent symptomatic hyperglycemia.
- Early intervention with metformin in combination with lifestyle changes (MNT and exercise) with continuing, timely augmentation therapy with additional agents (including early initiation of insulin therapy) as a means of achieving and maintaining recommended levels of glycemic control (i.e., A1C <7% for most patients) are highlights of this approach.

Citations for Evidence: Medical Management of Hyperglycemia in Type 2 Diabetes: A Consensus Algorithm

[3]The strength of the body of evidence for the specific measure focus should be systematically assessed and rated, e.g., USPSTF grading system www.ahrq.gov/clinic/uspstmeth.htm: A - The USPSTF recommends the service. There is high certainty that the net benefit is substantial. B - The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial. C - The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is at least moderate certainty that the net benefit is small. Offer or provide this service only if other considerations support the offering or providing the service in an individual patient. D - The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. I - The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

	for the Initiation and Adjustment of Therapy.Diabetes Care 31:1–11, 2008
21 (1c)	**Clinical Practice Guideline** *Cite the guideline reference; quote the specific guideline recommendation related to the measure and the guideline author's assessment of the strength of the evidence; and summarize the rationale for using this guideline over others.* **Guideline Citation:** Medical Management of Hyperglycemia in Type 2 Diabetes: A Consensus Algorithm for the Initiation and Adjustment of Therapy.Diabetes Care 31:1–11, 2008 **Specific guideline recommendation:** Approach to Treatment – Type 2 Initiating Therapy: • The authors recognize that for most individuals with type 2 diabetes, lifestyle interventions fail to achieve or maintain metabolic goals, either because of failure to lose weight, weight regain, progressive disease or a combination of factors. • Therefore, our consensus is that metformin therapy should be initiated concurrent with lifestyle intervention at diagnosis. • Metformin is recommended as the initial pharmacologic therapy, in the absence of specific contraindications, for its effect on glycemia, absence of weight gain or hypoglycemia, generally low level of side effects, high level of acceptance, and relatively low cost. • Metformin treatment should be titrated to its maximally effective dose over 1–2 months, as tolerated (Table 2). Rapid addition of other glucose-lowering medications should be considered in the setting of persistent symptomatic hyperglycemia. • Early intervention with metformin in combination with lifestyle changes (MNT and exercise) with continuing, timely augmentation therapy with additional agents (including early initiation of insulin therapy) as a means of achieving and maintaining recommended levels of glycemic control (i.e., A1C <7% for most patients) are highlights of this approach. **Guideline author's rating of strength of evidence** (*If different from USPSTF, also describe it and how it relates to USPSTF)***:** The recommendation is based on a consensus statement from the American Diabetes Association and the European Association for the Study of Diabetes. This would be most consistent with a USPSTF grade A. **Rationale for using this guideline over others:** Consensus Statement from the ADA
22 (1c)	**Controversy/Contradictory Evidence** *Summarize any areas of controversy, contradictory evidence, or contradictory guidelines and provide citations.* **Summary:** **Citations:**
23 (1)	**Briefly describe how this measure (as specified) will facilitate significant gains in healthcare quality related to the specific priority goals and quality problems identified above:** Identification of diabetics with an elevated HbA1C and absence of metformin and other diabetes medical therapy will facilitate early diabetes treatment by sending reminders to the providers regarding these high risk members who are not receiving diabetes treatment. Many providers and members may want to try lifestyle interventions first but consensus is that metformin therapy should be initiated with concurrent lifestyle changes. Early treatment of diabetes resulting in lowering HbA1C to below or around 7% has been shown to reduce micro and macrovascular complications of diabetes.
	SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES
	Note: Testing and results should be summarized in this form. However, additional detail and reports may be submitted as supplemental information or provided as a web page URL. If a measure has not been tested, it is only potentially eligible for time-limited endorsement.
24	**Supplemental Testing Information:** attached ☒ **OR** Web page URL:
25	**Reliability Testing**

(2b)	**Data/sample:** **Analytic Method:** **Testing Results:**
26 (2c)	**Validity Testing** **Data/sample:** **Analytic Method:** **Testing Results:**
27 (2d)	**Measure Exclusions** *Provide evidence to justify exclusion(s) and analysis of impact on measure results during testing.* **Summary of Evidence supporting exclusion(s):** **Citations for Evidence:** **Data/sample:** **Analytic Method:** **Testing Results:**
28 (2e)	**Risk Adjustment Testing** *Summarize the testing used to determine the need (or no need) for risk adjustment and the statistical performance of the risk adjustment method.* **Data/sample:** **Analytic Method:** **Testing Results:** ►**If outcome or resource use measure not risk adjusted, provide rationale:**
29 (2g)	**Testing comparability of results when more than 1 data method is specified** (*e.g., administrative claims or chart abstraction*) **Data/sample:** **Analytic Method:** **Results:**
30 (2f)	**Provide Measure Results from Testing or Current Use** (select one) **Data/sample:** **Methods to identify statistically significant and practically/meaningfully differences in performance:** . **Results:**
31 (2h)	**Identification of Disparities** ►If measure is stratified by factors related to disparities (i.e. race/ethnicity, primary language, gender, SES, health literacy), **provide stratified results:** ►If disparities have been reported/identified, but measure is not specified to detect disparities, provide rationale:

	USABILITY
32 (3)	*Current Use In use* *If in use, how widely used Health plan or sytem* ► *If "other," please describe:* ☐ *Used in a public reporting initiative, name of initiative:* *Sample report attached* ☐ *OR Web page URL:*
33 (3a)	**Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **Data/sample:** **Methods:** The performance measure is similar in message to a clinical alert that has been operational since 2007. Compliance to the clinical alert is measured using an analysis of subsequent claims and patient derived data, in this case the appearance of medical claims for diabetic treatment. In addition, a feedback tool accompanies every clinical alert message, and includes options indicating agreement or disagreement with the message. **Results:** In practice, fewer than 1% of the respondents disagreed with the medical literature, and 47% show objective evidence of compliance.
34 (3b, 3c)	**Relation to other NQF-endorsed™ measures** ►Is this measure similar or related to measure(s) already endorsed by NQF (on the same topic or the same target population)? *Measures can be found at www.qualityforum.org under Core Documents.* *Check all that apply* ☐ Have not looked at other NQF measures ☐ Other measure(s) on same topic ☐ Other measure(s) for same target population ☒ No similar or related measures **Name of similar or related NQF-endorsed™ measure(s):** **Are the measure specifications harmonized with existing NQF-endorsed™ measures?** (select one) ►If not fully harmonized, provide rationale: **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:**
	FEASIBILITY
35 (4a)	*How are the required data elements generated? Check all that apply* ☒ *Data elements are generated concurrent with and as a byproduct of care processes during care delivery (e.g., blood pressure or other assessment recorded by personnel conducting the assessment)* ☐ *Data elements are generated from a patient survey (e.g., CAHPS)* ☒ *Data elements are generated through coding performed by someone other than the person who obtained the original information (e.g., DRG or ICD-9 coding on claims)* ☒ *Other, Please describe: Data obtained through electronic personal health records and telephonic, nurse-driven disease management programs*
36 (4b)	*Electronic Sources All data elements* ►*If all data elements are not in electronic sources, specify the near-term path to electronic collection by most providers:* ►*Specify the data elements for the electronic health record:*
37 (4c)	*Do the specified exclusions require additional data sources beyond what is required for the other specifications? No* ►*If yes, provide justification:*
38	*Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure:* *Generally, the use of claims data has inherent errors and inaccuracies related to incorrect coding, or*

(4d)	*missing data, which can result in less specificity in the definition of denominator and /or the numerator. To minimize these errors and inaccuracies, we use clinically enriched data (laboratory results, medication lists) to augment the claims data. In addition where possible, to corroborate the claims data, we solicit feedback from both providers via a feedback form and patients from a personal health record or from a disease management program.* *We do not anticipate significant unintended consequences from the implantation of the measure. Our measures are all developed from evidence-based literature or from clinical guidelines and are designed to encourage appropriate care of the patient.* *Describe how could these potential problems be audited: The inclusion of patient-derived data from a personal health record or through a disease management program may be used to confirm the presence or absence of a test; ultimately the data sources may be tested against a sample of medical charts.* *Did you audit for these potential problems during testing? No If yes, provide results:*
39 (4e)	*Testing feasibility Describe what have you learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues: Multiple sources of corroborating clinical data are necessary to correctly identify patients in the denominator. Earlier testing efforts using specifications similar to HEDIS were more sensitive yet nonspecific. The additional of supporting information for certain diagnostic conditions (e.g., elevated HbA1C in addition to ICD9 codes for diabetes) significantly decreased the number identified in the denominator, yet the analysis led to a much higher compliance rate, likely because of the exclusion of fewer false positives in the denominator.*
	CONTACT INFORMATION
40	*Web Page URL for Measure Information Describe where users (implementers) should go for more details on specifications of measures, or assistance in implementing the measure.* *Web page URL: www.activehealth.net*
41	**Measure Intellectual Property Agreement Owner Point of Contact** **First Name:** Madhavi **MI:** **Last Name:** Vemireddy **Credentials (MD, MPH, etc.):** MD **Organization:** ActiveHealth Management **Street Address:** 102 Madison Avenue **City:** New York **State:** NY **ZIP:** 10016 **Email:** mvemireddy@activehealth.net **Telephone:** 212-651-8200 ext:
42	**Measure Submission Point of Contact** **If different than IP Owner Contact** **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):** **Organization:** **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext:
43	**Measure Developer Point of Contact** **If different than IP Owner Contact** **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):** **Organization:** **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext:
44	**Measure Steward Point of Contact** **If different than IP Owner Contact** *Identifies the organization that will take responsibility for updating the measure and assuring it is consistent with the scientific evidence and current coding schema; the steward of the measure may be different than the developer.* **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):** **Organization:** **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext
	ADDITIONAL INFORMATION

45	**Workgroup/Expert Panel involved in measure development** No workgroup or panel used ►If workgroup used, describe the members' role in measure development: ►Provide a list of workgroup/panel members' names and organizations:
46	*Measure Developer/Steward Updates and Ongoing Maintenance* *Year the measure was first released: 2007* *Month and Year of most recent revision: 12/2007* *What is the frequency for review/update of this measure? Biennially* *When is the next scheduled review/update for this measure? 2009*
47	**Copyright statement/disclaimers:** This information, including any attachments hereto, is the sole, exclusive, proprietary and confidential property of Active Health Management, Inc., and is for the exclusive use of The National Quality Forum. Any use, copying, disclosure, dissemination or distribution by anyone other than the National Quality Forum is strictly prohibited.
48	**Additional Information:**
49	**I have checked that the submission is complete and any blank fields indicate that no information is provided.** ☒
50	**Date of Submission** (*MM/DD/YY*)**:** 02/09/09

PATIENT & FAMILY ENGAGEMENT

PRIORITY STATEMENT: Engage Patients and Their Families in Managing Their Health and Making Decisions About Their Care

1.1. All providers will routinely solicit and publicly report on their patients' perspectives of care

1.2. All providers will work collaboratively with their patients to assist them in making informed decisions about treatment options consistent with their values and preferences

POPULATION HEALTH

PRIORITY STATEMENT: IMPROVE THE HEALTH OF THE U.S. POPULATION

2.1. The population will be up to date on all high-priority age- and gender-appropriate evidence-based clinical preventive services

2.2. The population will receive recommended evidence-based interventions to improve targeted healthy lifestyle behaviors

2.3. All communities will demonstrate a 10% improvement in their community index of health

2.4. Americans will have all recommended high priority healthy lifestyle behaviors under control

SAFETY

PRIORITY STATEMENT: IMPROVE THE SAFETY OF THE U.S. HEALTH CARE SYSTEM

3.1. All providers will drive all preventable healthcare-associated infections (HAI) to zero

3.2. All providers will drive the incidence of preventable NQF Serious Reportable Events (SRE) to zero

3.3. All hospitals will reduce preventable and premature mortality rates to best-in-class

3.4. All hospitals and their community partners will reduce 30-day mortality rates following hospitalization for select conditions to best-in-class

PALLIATIVE CARE

PRIORITY STATEMENT: GUARANTEE APPROPRIATE AND COMPASSIONATE CARE FOR PATIENTS WITH LIFE-LIMITING ILLNESSES

4.1. All providers will identify, document, and effectively treat physical symptoms (e.g. pain, shortness of breath, constipation, others) at levels acceptable to patients with a life-limiting illness

4.2. All providers will effectively address the psychosocial and spiritual needs of patients with life-limiting illnesses and their families according to their preferences

4.3. All eligible patients will receive high quality palliative care and hospice services

CARE COORDINATION

PRIORITY STATEMENT: ENSURE PATIENTS RECEIVE WELL-COORDINATED CARE ACROSS ALL PROVIDERS, SETTINGS, AND LEVELS OF CARE

5.1. All providers will accurately and completely reconcile medications across the continuum of care (i.e. admission, transfer within and between care providers, discharge, and outpatient appointments) and ensure communication with the next provider of services

5.2. All inpatient and outpatient providers will assess the patient's perspective of the coordination of their care using a validated care coordination survey tool

5.3. All providers will reduce 30-day all-cause readmission rates resulting from poorly coordinated care to best-in-class

5.4. All providers will reduce preventable emergency department (i.e. those that could be avoided with timely access to primary care) visits resulting from poorly coordinated care by 50%

PATIENT-FOCUSED CARE

PRIORITY STATEMENT: GUARANTEE HIGH VALUE CARE ACROSS ACUTE AND CHRONIC EPISODES

6.1. All patients will receive high-value care over the course of their acute or chronic illness

OVERUSE

PRIORITY STATEMENT: ELIMINATE WASTE WHILE ENSURING THE DELIVERY OF APPROPRIATE CARE

7.1. Reduce wasteful and inappropriate care for the top ten targeted areas by 50%

PERFORMANCE MEASURE RULE:

Diabetes and Elevated HbA1C – Use of Diabetes Medications

Denominator:

All of the Following Expressions are correct

1. Patient Age Between 18 And 75 Years And Patient Gender Exists
2. One of the Following Expressions is correct:
   a) Presence of Patient Data Confirming At Least 1 PDD- DIABETES In the past 24 Months

   b) Presence of At Least 2 DIABETES TYPE 2 Diagnosis in the past 5 Years
3. Presence of At Least 1 HB A1C VALUE Labs Result Value >/=8 In the past 6 Months Consecutive No Timeframe Begins on CE Run Date

Denominator Exclusions:

One of the Following Expressions is correct:

1. Presence of At Least 2 DIABETES TYPE 1 Diagnosis in the past 0 Anytime
2. Presence of At Least 3 COR PULMONALE Diagnosis in the past 12 Months
3. Presence of At Least 1 HOME O2 THERAPY (HCPCS) Procedure In the past 12 months
4. Presence of At Least 1 ACIDOSIS Diagnosis in the past 12 Months
5. Presence of At Least 1 LACTATE Labs Result Value > 5 In the past 12 Months
6. Presence of At Least 1 BICARBONATE Labs Result Value < 14 In the past 12 Months
7. Presence of At Least 1 CREATININE Labs Result Value >= 1.8 In the past 3 Months
8. Presence of Patient Data Confirming At Least 1 PDD- CREATININE Result >= 1.8 In the past 3 Months
9. Presence of At Least 1 GESTATIONAL DM/POLYCYSTIC OVARIES Diagnosis in the past 12 Months

10. Presence of 2 STEROID-INDUCED DM diagnosis in the past 12 months
11. Presence of At Least 1 ALCOHOL DEPENDENCE Diagnosis in the past 12 Months
12. Presence of At Least 1 CORTICOADRENAL INSUFFICIENCY Diagnosis in the past 12 Months
13. Liver Disease Exclusions Is Confirmed (see below)
14. COPD Validation Is Confirmed (see below)
15. CHF Any Stage Validation Is Confirmed (see below)
16. CKD Stage 3 Validation Is Confirmed (see below)
17. CKD Stage 4 Validation Is Confirmed (see below)
18. CKD Stage 5 Validation Is Confirmed (see below)
19. Pregnancy Exclusion Validation Is Confirmed (see below)

Numerator:

One of the Following Expressions is correct:

1. Presence of At Least 1 INSULIN THERAPY (HCPCS) Procedure In the past 12 months
2. Presence of At Least 1 Refill DM MEDS/INJECTABLES Exists In the past 12 months
3. Presence of At Least 1 Refill DM MEDS/NO SUPPLIES Exists In the past 12 months
4. Presence of Patient Data Confirming At Least 1 Refill DM MEDS/NO SUPPLIES Drug In the past 12 months

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Liver Disease Exclusion

One of the Following Expressions is correct

1. Presence of At Least 1 Refill HEPATITIS B Rx Exists In the past 12 Months
2. Presence of At Least 1 Refill HEPATITIS C TREATMENT Exists In the past 12 Months
3. Presence of At Least 1 SGOT (AST) Labs Result Value > 150 In the past 6 Months
4. Presence of At Least 1 SGPT (ALT) Labs Result Value > 150 In the past 6 Months
5. Presence of At Least 4 LIVER DISEASE CHRONIC Diagnosis in the past 0 Anytime Timeframe Between Claims Yes > 1 Months
6. Presence of At Least 2 TRANSPLANT LIVER COMPLICATED (ICD-9) Diagnosis in the past 12 Months

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COPD Validation

All of the following are correct:

1. Patient age >/= 35 years
2. One of the following is correct:
    a. All of the following are correct:
        i. Presence of at least 2 COPD diagnosis in the past 5 years
        ii. One of the following is correct:

1. Presence of at least 2 refills INHALED ANTICHOLINERGIC AND BETA-AGONIST COMBO in the past 12 months

2. Presence of at least 2 refills BRONCHODILATOR (LONG ACTING) exists in the past 12 months

3. Presence of at least 1 COPD CPT procedure in the past 12 months

4. Presence of at least 2 refills THEOPHYLLINE in the past 12 months

5. Presence of at least 2 HOME O2 THERAPY (HCPCS) procedure in the past 12 Months

6. All of the following are correct:

    a. Presence of at least 2 refills B-AGONIST (SHORT ACTING-INHALED) in the past 12 months

    b. Presence of at least 2 refills INHALED ANTICHOLINERGIC DRUGS in the past 12 months

b. Presence of patient data confirming at least 1 PDD- COPD in the past

COPD Validation Exclusion

One of the following is correct:

1. Presence of at least 1 TRANSPLANT LUNG (CPT) procedure in the past

2. Presence of at least 2 TRANSPLANT LUNG (ICD-9) diagnosis in the past

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CHF Any Stage Validation

All of the following are correct:

1. Patient age >/= 18 years

2. One of the following is correct:

a. All of the following are correct:

    i. Presence of at least 2 CHF (CONGESTIVE HEART FAILURE) diagnosis in the past

        1. One of following is correct:

            a. Presence of at least 1 refill CARVEDILOL/LONG ACTING METOPROLOL 60 total days supply in the past 12 months

            b. Presence of at least 1 refill BIDIL 60 total days supply in the past 12 months

            c. Presence of at least 1 refill SPIRONOLACTONE/ EPLERENONE 60 total days supply in the past 12 months

            d. All of the following are correct:

                i. Presence of at least 1 refill ANTIHYPE/ ARB-ACEI 60 total days supply in the past 12 months

                ii. Presence of at least 1 refill DIURETICS/ LOOP DIURETICS 60 total days supply in the past 12 months

            e. All of the following are correct:

                i. Presence of at least 1 refill HYDRALAZINE 60 total days supply in the past 12 months

                ii. Presence of at least 1 refill NITRATES-LONG ACTING 60 total days supply in the past 12 months

            f. All of the following are correct:

                i. Presence of at least 1 refill DIGOXIN 60 total days supply in the past 12 months

                ii. **Exclusion** – Presence of at least 2 ATRIAL FIBRILLATION diagnosis in the past 12 months

b. Presence of patient data confirming at least 1 PDD- EJECTION FRACTION VALUE result < 40 in the past

c. Presence of patient data confirming at least 1 PDD- CHF in the past

d. Presence of at least 1 CHF - EF <40 procedure in the past 12 months

e. Presence of at least 4 CHF (CONGESTIVE HEART FAILURE) diagnosis in the past 24 months with at least a 6 month separation between claims.

CHF Any Stage Validation Exclusion

One of the following is correct:

1. Presence of at least 1 VALVE SURGERY procedure in the past 6 months

2. Presence of at least 1 VALVE REPLACEMENT diagnosis in the past 6 months

3. Presence of at least 2 TRANSPLANT HEART (ICD-9) diagnosis in the past

4. Presence of at least 1 TRANSPLANT HEART procedure in the past

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CKD Stage 3 Validation

One of the following is correct:

1. Presence of at least 2 CKD STAGE 3 diagnosis in the past 12 months at least 3 months apart

2. All of the following are correct:

a. Presence of at least 2 CKD – NOS diagnosis in the past 12 months at least 3 months apart

b. Presence of at least 1 result for creatinine clearance between 30 and 59 in the past

c. If patient age >/= 18 years

CKD Stage 3 Validation Exclusion

One of the following is correct:

1. Presence of at least 1 TRANSPLANT RENAL (CPT) procedure in the past 12 months

2. CKD Stage 5 validation is confirmed for the member (see below)

3. Presence of a current refill for CALCIMIMETICS

4. CKD Stage 4 validation is confirmed for the member (see below)

CKD Stage 4 Validation

One of the following is correct:

1. Presence of at least 2 CKD STAGE 4 diagnosis in the past 12 months at least 3 months apart

2. All of the folllowing are correct:

    a. Presence of at least 2 CKD – NOS diagnosis in the past 12 months at least 3 months apart

    b. Presence of at least 1 result for creatinine clearance between 15 and 29 in the past

    c. If patient age >/= 18 years

CKD Stage 4 Validation Exclusion

One of the following is correct:

1. Presence of at least 1 TRANSPLANT RENAL (CPT) procedure in the past 12 months

2. CKD Stage 5 validation is confirmed for the member (see below)

3. Presence of a current refill for CALCIMIMETICS

CKD Stage 5 Validation

One of the following is correct:

1. Presence of at least 2 CKD STAGE 5 diagnosis in the past 12 months at least 3 months apart

2. All of the following are correct:

    a. Presence of at least 2 CKD – NOS diagnosis in the past 12 months at least 3 months apart

    b. Presence of at least 1 result for creatinine clearance between 0.1 And 14 in the past

    c. If patient age >/= 18 years

3. Presence of at least 2 DIALYSIS CHRONIC (CPT) procedure in the past 12 months

4. Presence of patient data confirming at least 1 PDD- DIALYSIS in the past 12

5. months

CKD Stage 5 Validation Exclusion

The following is correct:

Presence of at least 1 TRANSPLANT RENAL (CPT) procedure in the past 12 months

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Pregnancy Exclusion Validation

a. One of the following is correct:
    a. Presence of At Least 1 HCG (LOINC) Labs Result Value > 100 in the past 6 months
    b. Presence of Patient Data Confirming At Least 1 PDD- PREGNANCY in the past 6 months
    c. Presence of At Least 1 PREGNANCY Diagnosis in the past 6 months
    d. Presence of At Least 1 PREGNANCY RELATED PROCEDURE Procedure in the past 6 months

b. Exclusion - If One of the Following is correct
    a. Presence of At Least 1 DELIVERY AND ABORTION (ICD9) Diagnosis in the past 3 months

b. Presence of At Least 1 HYSTERECTOMY Procedure in the past 3 months
c. Presence of At Least 1 DELIVERY AND ABORTION (CPT) Procedure in the past 3 months
d. Presence of At Least 1 Refill UTEROTONICS Exists in the past 3 months
e. Presence of At Least 1 NONVIABLE PREGNANCY Diagnosis in the past 3 months

Note: A 3 month time window has been added to certain timeframes in order to account for the inherent delay in the acquisition of administrative claims data.

Note: A current refill is defined as a refill in which the day supply of a drug extends into the end of the measurement window plus a grace period of 30 days.

THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0

August 2008

The measure information you submit will be shared with NQF's Steering Committees and Technical Advisory Panels to evaluate measures against the NQF criteria of importance to measure and report, scientific acceptability of measure properties, usability, and feasibility. Four conditions (as indicated below) must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards. Not all acceptable measures will be strong—or equally strong—among each set of criteria. The assessment of each criterion is a matter of degree; however, all measures must be judged to have met the first criterion, importance to measure and report, in order to be evaluated against the remaining criteria. References to the specific measure evaluation criteria are provided in parentheses following the item numbers. Please refer to the *Measure Evaluation Criteria* for more information at *www.qualityforum.org* under Core Documents. Additional guidance is being developed and when available will be posted on the NQF website.

Use the tab or arrow (↓→) keys to move the cursor to the next field (or back ←↑). There are three types of response fields:

- drop-down menus - select one response;
- check boxes – check as many as apply; and
- text fields – you can copy and paste text into these fields or enter text; these fields are not limited in size, but in most cases, we ask that you summarize the requested information.

Please note that URL hyperlinks do not work in the form; you will need to type them into your web browser.

Be sure to answer all questions. Fields that are left blank will be interpreted as no or none. Information must be provided in this form. Attachments are not allowed except when specifically requested or to provide additional detail or source documents for information that is summarized in this form. If you have important information that is not addressed by the questions, they can be entered into item #48 near the end of the form.

For questions about this form, please contact the NQF Project Director listed in the corresponding call for measures.

	CONDITIONS FOR CONSIDERATION BY NQF
	Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards.
A (A)	*Public domain or Intellectual Property Agreement signed: IP Agreement signed and submitted (If no, do not submit)* *Template for the Intellectual Property Agreement is available at www.qualityforum.org under Core Documents.*
B (B)	*Measure steward/maintenance: Is there an identified responsible entity and process to maintain and update the measure on a schedule commensurate with clinical innovation, but at least every 3 years?* *Yes, information provided in contact section (If no, do not submit)*
C (C)	*Intended use: Does the intended use of the measure include BOTH public reporting AND quality improvement? Yes (If no, do not submit)*
D (D)	*Fully developed and tested: Is the measure fully developed AND tested? Yes, fully developed and tested (If not tested and no plans for testing within 24 months, do not submit)*

THE NATIONAL QUALITY FORUM

MEASURE SUBMISSION FORM VERSION 3.0

August 2008

	(for NQF staff use) NQF Review #: EC-274-08 NQF Project: National Voluntary Consensus Standards for Ambulatory Care Using Clinically Enriched Administrative Data
	MEASURE SPECIFICATIONS & DESCRIPTIVE INFORMATION
1	*Information current as of (date- MM/DD/YY): 06/25/09*
2	*Title of Measure: Primary Prevention of Cardiovascular Events in Diabetics (older than 40 years) – Use of Aspirin or Antiplatelet Therapy*
3	**Brief description of measure [1]:** Percentage of adult patients with diabetes treated with aspirin or an antiplatelet agent
4 (2a)	**Numerator Statement:** Patients with a refill for aspirin or an antiplatelet agent **Time Window:** 6 months **Numerator Details** (Definitions, codes with description): see attached
5 (2a)	**Denominator Statement:** All patients, 40 years and older, with diabetes, who have been asked about aspirin use **Time Window:** 5 years **Denominator Details** (Definitions, codes with description): see attached
6 (2a, 2d)	**Denominator Exclusions:** Contraindications to aspirin therapy, including: - Hemorrhage contraindications and procedures - Neutropenia - Thrombocytopenia - Hematocrit lab value </= 25 - INR lab value > 1.6 - Platelet lab value </= 50 - WBC lab value < 2.0 - Chronic liver disease - Aspirin intolerance - Aspirin-induced asthma - Intracerebral hemorrhage - Coagulopathies (bleeding disorders) Other denominator exclusions include: - Warfarin use - Long term anticoagulation - Patient or provider feedback indicating allergy or intolerance to the drug in the past - Patient or provider feedback indicating that there is a contraindication to adding the drug General exclusions: •Evidence of metastatic disease or active treatment of malignancy (chemotherapy or radiation therapy) in the last 6 months; •Patients who have been in a skilled nursing facility in the last 3 months

[1] Example of measure description: Percentage of adult patients with diabetes aged 18-75 years receiving one or more A1c test(s) per year.

	Denominator Exclusion Details (Definitions, codes with description): see attached
7 (2a, 2h)	**Stratification** Do the measure specifications require the results to be stratified? No ► If "other" describe: **Identification of stratification variable(s):** **Stratification Details** (Definitions, codes with description):
8 (2a, 2e)	**Risk Adjustment** Does the measure require risk adjustment to account for differences in patient severity before the onset of care? No ► **If yes,** (select one) ► Is there a separate proprietary owner of the risk model? (select one) **Identify Risk Adjustment Variables:** **Detailed risk model:** attached ☐ **OR** Web page URL:
9 (2a)	**Type of Score:** Rate/proportion **Calculation Algorithm:** attached ☒ **OR** Web page URL: **Interpretation of Score** (*Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score*) Better quality = Higher score ► If "Other", please describe:
10 (2a. 4a, 4b)	**Identify the required data elements**(e.g., primary diagnosis, lab values, vital signs)**:** ICD9, CPT, pharmacy claims, lab values, patient derived data **Data dictionary/code table** attached ☒ **OR** Web page URL: **Data Quality** (2a) *Check all that apply* ☒ Data are captured from an authoritative/accurate source (e.g., lab values from laboratory personnel) ☒ Data are coded using recognized data standards ☒ Method of capturing data electronically fits the workflow of the authoritative source ☒ Data are available in EHRs ☐ Data are auditable
11 (2a, 4b)	**Data Source and Data Collection Methods** *Identifies the data source(s) necessary to implement the measure specifications. Check all that apply* ☒ Electronic Health/Medical Record ☐ Electronic Clinical Database, Name: ☐ Electronic Clinical Registry, Name: ☒ Electronic Claims ☒ Electronic Pharmacy data ☐ Electronic Lab data ☒ Electronic source – other, Describe: Personal health record data collection ☐ Paper Medical Record ☐ Standardized clinical instrument, Name: ☐ Standardized patient survey, Name: ☐ Standardized clinician survey, Name: ☒ Other, Describe: Telephonic data collection from nurse-delivered disease management program. Instrument/survey attached ☐ **OR** Web page URL:
12 (2a)	**Sampling** *If measure is based on a sample, provide instructions and guidance on sample size.* **Minimum sample size:** **Instructions:**
13 (2a)	**Type of Measure:** Process ► If "Other", please describe: ► If part of a composite or paired with another measure, please identify composite or paired measure
14 (2a)	**Unit of Measurement/Analysis** (*Who or what is being measured*) *Check all that apply.* ☒ Can be measured at all levels ☐ Individual clinician (e.g., physician, nurse) ☐ Group of clinicians (e.g., facility department/unit, group practice) ☐ Facility (e.g., hospital, nursing home) ☐ Integrated delivery system ☐ Health plan ☐ Community/Population ☐ Other (*Please describe*):

15 (2a)	**Applicable Care Settings** *Check all that apply* ☐ Can be used in all healthcare settings ☒ Ambulatory Care (office/clinic) ☐ Behavioral Healthcare ☒ Community Healthcare ☐ Dialysis Facility ☐ Emergency Department ☐ EMS emergency medical services ☒ Health Plan ☐ Home Health ☐ Hospice ☐ Hospital ☐ Long term acute care hospital ☒ Nursing home/ Skilled Nursing Facility (SNF) ☐ Prescription Drug Plan ☐ Rehabilitation Facility ☐ Substance Use Treatment Program/Center ☐ Other (*Please describe*):
	IMPORTANCE TO MEASURE AND REPORT
	Note: This is a threshold criterion. If a measure is not judged to be sufficiently important to measure and report, it will not be evaluated against the remaining criteria.
16 (1a)	**Addresses a Specific National Priority Partners Goal** *Enter the numbers of the specific goals related to this measure (see list of goals on last page)*: 2.1,2.2,6.1
17 (1a)	**If not related to NPP goal, identify high impact aspect of healthcare** affects large numbers **Summary of Evidence:** **Citations[2] for Evidence:**
18 (1b)	**Opportunity for Improvement** *Provide evidence that demonstrates considerable variation, or overall poor performance, across providers.* **Summary of Evidence:** Cardiovascular disease, including ischemic coronary heart disease, stroke, and peripheral vascular disease, is the leading cause of morbidity and death in the United States. In 1997, the age-adjusted mortality rate due to coronary heart disease, cerebrovascular disease, and atherosclerotic disease was 194 per 100 000 persons, which is equivalent to more than 500 000 deaths per year. The estimated direct and indirect costs of coronary heart disease and stroke were $145 billion for 1999. A study looking at the use of aspirin before (cohort data from UKPDS) and after the ADA and JBS recommendations, showed an increase in the percentage of people without pre-existing CVD who were on aspirin (17 to 31%). This represents sub-optimal prescribing. **Citations for Evidence:** Aspirin for the Primary Prevention of Cardiovascular Events: A Summary of the Evidence for the U.S. Preventive Services Task Force Ann Intern Med 136:161–172, 2002 Cull CA, Neil HA, Holman RR. Changing aspirin use in patients with Type 2 diabetes in the UKPDS. Diabetic Medicine 2004;21:1368-71
19 (1b)	**Disparities** *Provide evidence that demonstrates disparity in care/outcomes related to the measure focus among populations.* **Summary of Evidence:** The mean age of subjects was 64 years (range 31–93). The prevalence of antiplatelet use was 54% overall; 45% for subjects without known CVD vs. 78% for those with CVD; 46% for women vs. 63% for men; and 45% for younger subjects (age< 65) vs. 62% for senior citizens. After controlling for race/ethnicity, income, education, marital status, insurance status and prescription coverage, the following were associated with the use of antiplatelet therapy: presence of known CVD (OR 3.4 [2.2, 5.1]), male sex (OR 2.0 [1.4, 2.8]), and age > = 65 (OR 1.9 [1.3, 2.7]). The prevalence of antiplatelet therapy for younger women without CVD was 32.8% compared to a prevalence of 90.3% for older men with CVD. Despite clinical practice guidelines recommending antiplatelet therapy for patients with diabetes, there are still many eligible patients not receiving this beneficial therapy, particularly patients under 65, women, and patients without known CVD. Effective methods to increase antiplatelet use should be considered at the national, community, practice and provider level. **Citations for evidence:** Prevalence of antiplatelet therapy in patients with diabetes. Cardiovasc Diabetol. 2005; 4: 18

[2] Citations can include, but are not limited to journal articles, reports, web pages (URLs).

20 (1c)

If measuring an Outcome Describe relevance to the national health goal/priority, condition, population, and/or care being addressed:

If not measuring an outcome, provide evidence supporting this measure topic and grade the strength of the evidence

Summarize the evidence (including citations to source) supporting the focus of the measure as follows:

- Intermediate outcome – evidence that the measured intermediate outcome (e.g., blood pressure, Hba1c) leads to improved health/avoidance of harm or cost/benefit.
- Process – evidence that the measured clinical or administrative process leads to improved health/avoidance of harm and
  if the measure focus is on one step in a multi-step care process, it measures the step that has the greatest effect on improving the specified desired outcome(s).
- Structure – evidence that the measured structure supports the consistent delivery of effective processes or access that lead to improved health/avoidance of harm or cost/benefit.
- Patient experience – evidence that an association exists between the measure of patient experience of health care and the outcomes, values and preferences of individuals/ the public.
- Access – evidence that an association exists between access to a health service and the outcomes of, or experience with, care.
- Efficiency– demonstration of an association between the measured resource use and level of performance with respect to one or more of the other five IOM aims of quality.

Type of Evidence *Check all that apply*

- ☒ Evidence-based guideline
- ☐ Meta-analysis
- ☐ Systematic synthesis of research
- ☐ Quantitative research studies
- ☐ Qualitative research studies
- ☐ Other (*Please describe*):

Overall Grade for Strength of the Evidence[3] (*Use the USPSTF system, or if different, also describe how it relates to the USPSTF system)*: A

Summary of Evidence (*provide guideline information below*)**:** The proportion of patients with diabetes mellitus was small in each trial (PPP, 17%; HOT, 8%; PHS, 2%; BMD, 2%; TPT, 2%). In Physician Health Study, patients with diabetes derived greater benefit from aspirin than those without diabetes (relative risk, 0.39 vs. 0.60). Pooled data from aspirin trials in secondary prevention settings and a single trial in diabetic patients with and without coronary heart disease also suggested that diabetic patients benefit as much or more from aspirin as nondiabetic patients.

Citations for Evidence: Aspirin for the Primary Prevention of Cardiovascular Events: A Summary of the Evidence for the U.S. Preventive Services Task Force Ann Intern Med, Jan 2002; 136: 161 - 172

21 (1c)

Clinical Practice Guideline *Cite the guideline reference; quote the specific guideline recommendation related to the measure and the guideline author's assessment of the strength of the evidence; and summarize the rationale for using this guideline over others.*

Guideline Citation: Standards of Medical Care in Diabetes—2008 Diabetes Care 31:S12-S54, 2008

Specific guideline recommendation: Use aspirin therapy (75–162 mg/day) as a primary prevention strategy in those with type 1 or 2 diabetes at increased cardiovascular risk, including those who are >40 years of age or who have additional risk factors (family history of CVD, hypertension, smoking, dyslipidemia, or albuminuria).

[3]The strength of the body of evidence for the specific measure focus should be systematically assessed and rated, e.g., USPSTF grading system www.ahrq.gov/clinic/uspstmeth.htm: A - The USPSTF recommends the service. There is high certainty that the net benefit is substantial. B - The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial. C - The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is at least moderate certainty that the net benefit is small. Offer or provide this service only if other considerations support the offering or providing the service in an individual patient. D - The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. I - The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

	Guideline author's rating of strength of evidence (*If different from USPSTF, also describe it and how it relates to USPSTF)***:** A Level of Evidence A: Clear evidence from well-conducted, generalizable, randomized controlled trials that are adequately powered, including: • Evidence from a well-conducted multicenter trial • Evidence from a meta-analysis that incorporated quality ratings in the analysis Compelling nonexperimental evidence, i.e., "all or none" rule developed by the Centre for Evidence-Based Medicine at Oxford Supportive evidence from well-conducted randomized controlled trials that are adequately powered, including: • Evidence from a well-conducted trial at one or more institutions • Evidence from a meta-analysis that incorporated quality ratings in the analysis **Rationale for using this guideline over others:** Nationally recognized guideline developed by the ADA
22 (1c)	**Controversy/Contradictory Evidence** *Summarize any areas of controversy, contradictory evidence, or contradictory guidelines and provide citations*. **Summary:** Two early randomized trials of aspirin had conflicting results, however, and lacked sufficient power to estimate major harms, such as gastrointestinal bleeding and hemorrhagic stroke.5,6 Thus, the role of aspirin in primary prevention has remained controversial **Citations:** Aspirin for the Primary Prevention of Cardiovascular Events: A Summary of the Evidence for the U.S. Preventive Services Task Force Ann Intern Med, Jan 2002; 136: 161 - 172
23 (1)	**Briefly describe how this measure (as specified) will facilitate significant gains in healthcare quality related to the specific priority goals and quality problems identified above:** The evidence supports the addition of aspirin in this population and will help to decrease cardiovascular events.
	SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES
	Note: Testing and results should be summarized in this form. However, additional detail and reports may be submitted as supplemental information or provided as a web page URL. If a measure has not been tested, it is only potentially eligible for time-limited endorsement.
24	**Supplemental Testing Information:** attached ☐ **OR** Web page URL:
25 (2b)	**Reliability Testing** **Data/sample:** **Analytic Method:** **Testing Results:**
26 (2c)	**Validity Testing** **Data/sample:** **Analytic Method:** **Testing Results:**
27 (2d)	**Measure Exclusions** *Provide evidence to justify exclusion(s) and analysis of impact on measure results during testing.* **Summary of Evidence supporting exclusion(s):** **Citations for Evidence:** **Data/sample:**

	Analytic Method: **Testing Results:**
28 (2e)	**Risk Adjustment Testing** *Summarize the testing used to determine the need (or no need) for risk adjustment and the statistical performance of the risk adjustment method.* **Data/sample:** **Analytic Method:** **Testing Results:** ►**If outcome or resource use measure not risk adjusted, provide rationale:**
29 (2g)	**Testing comparability of results when more than 1 data method is specified** (*e.g., administrative claims or chart abstraction*) **Data/sample:** **Analytic Method:** **Results:**
30 (2f)	**Provide Measure Results from Testing or Current Use** Results from testing **Data/sample:** We measured a population of 459,196 commercially insured members. **Methods to identify statistically significant and practically/meaningfully differences in performance:** Compliance to the performance measure is measured using an analysis of the claims data; in this case looking for evidence of an antiplatelet agent. In addition, where appropriate we analyze patient data collected either from the patient's PHR or during a disease management program. **Results:** We found that of the 22,623 members who satisfied the denominator, 2,650 were in the numerator, indicating a compliance rate of 12%.
31 (2h)	**Identification of Disparities** ►If measure is stratified by factors related to disparities (i.e. race/ethnicity, primary language, gender, SES, health literacy), **provide stratified results:** ►If disparities have been reported/identified, but measure is not specified to detect disparities, provide rationale:
	USABILITY
32 (3)	*Current Use In use* *If in use, how widely used Health plan or sytem* ► *If "other," please describe:* ☐ *Used in a public reporting initiative, name of initiative:* *Sample report attached* ☐ *OR Web page URL:*
33 (3a)	**Testing of Interpretability** (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*) **Data/sample:** Administrative claims database from health plans; lab results data; patient derived data. **Methods:** The performance measure is similar in message to a clinical alert that has been operational since 2003. Compliance to the clinical alert is measured using an analysis of subsequent claims, in this case the appearance of pharmacy claims for aspirin. In addition, a feedback tool accompanies every clinical alert message, and includes options indicating agreement or disagreement with the message. **Results:** In practice, fewer than 1% of the respondents disagreed with the medical literature, and more than 7.8% show objective evidence of compliance with the clinical alert.

34 (3b, 3c)	**Relation to other NQF-endorsed™ measures** ►Is this measure similar or related to measure(s) already endorsed by NQF (on the same topic or the same target population)? *Measures can be found at www.qualityforum.org under Core Documents.* *Check all that apply* ☐ Have not looked at other NQF measures ☐ Other measure(s) on same topic ☐ Other measure(s) for same target population ☒ No similar or related measures **Name of similar or related NQF-endorsed™ measure(s):** **Are the measure specifications harmonized with existing NQF-endorsed™ measures?** Not harmonized ►If not fully harmonized, provide rationale: **Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:**
	FEASIBILITY
35 (4a)	*How are the required data elements generated? Check all that apply* ☒ *Data elements are generated concurrent with and as a byproduct of care processes during care delivery (e.g., blood pressure or other assessment recorded by personnel conducting the assessment)* ☐ *Data elements are generated from a patient survey (e.g., CAHPS)* ☒ *Data elements are generated through coding performed by someone other than the person who obtained the original information (e.g., DRG or ICD-9 coding on claims)* ☒ *Other, Please describe: Data obtained through electronic personal health records and telephonic, nurse-driven disease management programs*
36 (4b)	*Electronic Sources All data elements* ►*If all data elements are not in electronic sources, specify the near-term path to electronic collection by most providers:* ►*Specify the data elements for the electronic health record:*
37 (4c)	*Do the specified exclusions require additional data sources beyond what is required for the other specifications? No* ►*If yes, provide justification:*
38 (4d)	*Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure:* *Generally, the use of claims data has inherent errors and inaccuracies related to incorrect coding, or missing data, which can result in less specificity in the definition of denominator and /or the numerator. To minimize these errors and inaccuracies, we use clinically enriched data (laboratory results, medication lists) to augment the claims data. In addition where possible, to corroborate the claims data, we solicit feedback from both providers via a feedback form and patients from a personal health record or from a disease management program.* *We do not anticipate significant unintended consequences from the implantation of the measure. Our measures are all developed from evidence-based literature or from clinical guidelines and are designed to encourage appropriate care of the patient.* *Describe how could these potential problems be audited: The inclusion of patient-derived data from a personal health record or through a disease management program may be used to confirm the presence or absence of a medication; ultimately the data sources may be tested against a sample of medical charts.* *Did you audit for these potential problems during testing? No If yes, provide results:*
39 (4e)	*Testing feasibility Describe what have you learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:*

	Multiple sources of corroborating clinical data are necessary to correctly identify patients in the denominator. Earlier testing efforts using specifications similar to HEDIS were more sensitive yet nonspecific. The addition of supporting information for certain diagnostic conditions (e.g., diabetic medications and supplies in addition to ICD9 codes for diabetes) significantly decreased the number identified in the denominator, yet the analysis led to a much higher compliance rate, likely because of the exclusion of fewer false positives in the denominator.
	CONTACT INFORMATION
40	*Web Page URL for Measure Information* *Describe where users (implementers) should go for more details on specifications of measures, or assistance in implementing the measure.* *Web page URL: www.activehealth.net*
41	**Measure Intellectual Property Agreement Owner Point of Contact** **First Name:** Madhavi **MI:** **Last Name:** Vemireddy **Credentials (MD, MPH, etc.):** MD **Organization:** ActiveHealth Management **Street Address:** 102 Madison Avenue **City:** New York **State:** NY **ZIP:** 10016 **Email:** mvemireddy@activehealth.net **Telephone:** 212-651-8200 ext:
42	**Measure Submission Point of Contact** **If different than IP Owner Contact** **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):** **Organization:** **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext:
43	**Measure Developer Point of Contact** **If different than IP Owner Contact** **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):** **Organization:** **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext:
44	**Measure Steward Point of Contact** **If different than IP Owner Contact** *Identifies the organization that will take responsibility for updating the measure and assuring it is consistent with the scientific evidence and current coding schema; the steward of the measure may be different than the developer.* **First Name:** **MI:** **Last Name:** **Credentials (MD, MPH, etc.):** **Organization:** **Street Address:** **City:** **State:** **ZIP:** **Email:** **Telephone:** ext
	ADDITIONAL INFORMATION
45	**Workgroup/Expert Panel involved in measure development** No workgroup or panel used ►If workgroup used, describe the members' role in measure development: ►Provide a list of workgroup/panel members' names and organizations:
46	*Measure Developer/Steward Updates and Ongoing Maintenance* *Year the measure was first released: 2003* *Month and Year of most recent revision: 10/2008* *What is the frequency for review/update of this measure? Biennially* *When is the next scheduled review/update for this measure? 2010*
47	**Copyright statement/disclaimers:** This information, including any attachments hereto, is the sole, exclusive, proprietary and confidential property of Active Health Management, Inc., and is for the exclusive use of The National Quality Forum. Any use, copying, disclosure, dissemination or distribution by anyone other than the National Quality Forum is strictly prohibited.
48	**Additional Information:**
49	**I have checked that the submission is complete and any blank fields indicate that no information is provided.** ☒
50	**Date of Submission** (*MM/DD/YY*)**:** 02/09/09

PATIENT & FAMILY ENGAGEMENT

PRIORITY STATEMENT: Engage Patients and Their Families in Managing Their Health and Making Decisions About Their Care

1.1. All providers will routinely solicit and publicly report on their patients' perspectives of care

1.2. All providers will work collaboratively with their patients to assist them in making informed decisions about treatment options consistent with their values and preferences

POPULATION HEALTH

PRIORITY STATEMENT: IMPROVE THE HEALTH OF THE U.S. POPULATION

2.1. The population will be up to date on all high-priority age- and gender-appropriate evidence-based clinical preventive services

2.2. The population will receive recommended evidence-based interventions to improve targeted healthy lifestyle behaviors

2.3. All communities will demonstrate a 10% improvement in their community index of health

2.4. Americans will have all recommended high priority healthy lifestyle behaviors under control

SAFETY

PRIORITY STATEMENT: IMPROVE THE SAFETY OF THE U.S. HEALTH CARE SYSTEM

3.1. All providers will drive all preventable healthcare-associated infections (HAI) to zero

3.2. All providers will drive the incidence of preventable NQF Serious Reportable Events (SRE) to zero

3.3. All hospitals will reduce preventable and premature mortality rates to best-in-class

3.4. All hospitals and their community partners will reduce 30-day mortality rates following hospitalization for select conditions to best-in-class

PALLIATIVE CARE

PRIORITY STATEMENT: GUARANTEE APPROPRIATE AND COMPASSIONATE CARE FOR PATIENTS WITH LIFE-LIMITING ILLNESSES

4.1. All providers will identify, document, and effectively treat physical symptoms (e.g. pain, shortness of breath, constipation, others) at levels acceptable to patients with a life-limiting illness

4.2. All providers will effectively address the psychosocial and spiritual needs of patients with life-limiting illnesses and their families according to their preferences

4.3. All eligible patients will receive high quality palliative care and hospice services

CARE COORDINATION

PRIORITY STATEMENT: ENSURE PATIENTS RECEIVE WELL-COORDINATED CARE ACROSS ALL PROVIDERS, SETTINGS, AND LEVELS OF CARE

5.1. All providers will accurately and completely reconcile medications across the continuum of care (i.e. admission, transfer within and between care providers, discharge, and outpatient appointments) and ensure communication with the next provider of services

5.2. All inpatient and outpatient providers will assess the patient's perspective of the coordination of their care using a validated care coordination survey tool

5.3. All providers will reduce 30-day all-cause readmission rates resulting from poorly coordinated care to best-in-class

5.4. All providers will reduce preventable emergency department (i.e. those that could be avoided with timely access to primary care) visits resulting from poorly coordinated care by 50%

PATIENT-FOCUSED CARE

PRIORITY STATEMENT: GUARANTEE HIGH VALUE CARE ACROSS ACUTE AND CHRONIC EPISODES

6.1. All patients will receive high-value care over the course of their acute or chronic illness

OVERUSE

PRIORITY STATEMENT: ELIMINATE WASTE WHILE ENSURING THE DELIVERY OF APPROPRIATE CARE

7.1. Reduce wasteful and inappropriate care for the top ten targeted areas by 50%

PERFORMANCE MEASURE RULE:
Primary Prevention of Cardiovascular Events in Diabetics (older than 40 years) – Use of Aspirin Therapy

DENOMINATOR

All of the following are correct:

1. Patient age >/= 40 years
2. Diabetes adult validation is confirmed for the member (see below).
3. One of the following is correct:
    a. Presence of patient data confirming PDD- ASPIRIN USE NOT OBS in the past 6 months
    b. Presence of patient data confirming PDD- ASPIRIN USE in the past 6 months

DENOMINATOR EXCLUSIONS

One of the following is correct:

1. Presence of at least 2 LIVER DISEASE CHRONIC diagnosis in the past 12 months
2. Presence of patient data confirming PDD- ASPIRIN INTOLERANCE in the past
3. Presence of patient data confirming PDD- ASTHMA INDUCED BY ASA/NSAID in the past
4. Antiplatelet agent contraindications validation is confirmed for the member (see below).
5. Antiplatelet agent alternatives validation is confirmed for the member (see below).

NUMERATOR

All of the following are correct:

1. Denominator is true
2. One of the following is correct:
    a. Presence of a at least 1 refill for ASPIRIN in the past 12 months
    b. Presence of patient data confirming at least 1 refill for ASPIRIN in the past 12 months
    c. Presence of patient data confirming PDD- ASPIRIN USE in the past 12 months
    d. Presence of at least 1 LONG-TERM ASPIRIN diagnosis in the past 12 months
    e. Presence of at least 1 refill for ANTIPLATELET AGENTS in the past 12 months

f. Presence of patient data confirming at least 1 refill for ANTIPLATELET AGENTS in the past 12 months

g. Presence of patient data confirming PDD- ANTIPLATELET USE in the past 12 months

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Diabetes Adult Validation

All of the following are correct:

1. Patient age ≥18 years
2. One of the following is correct:
    a. Presence of patient data confirming at least 1 PDD- DIABETES in the past 24 months
    b. Presence of at least 4 claims DIABETES MELLITUS diagnosis in the past 12 months with at least a 3 month separation between claims
    c. All of the following are correct:
        i. Presence of at least 1 DIABETES MELLITUS diagnosis in the past 5 years beginning at least 1 month in the past
        ii. One of the following is correct:
            1. Presence of at least 2 refills DM MEDS AND SUPPLIES exists in the past 12 months
            2. Presence of at least 2 DM MEDS AND SUPPLIES (HCPCS) procedure in the past 12 months
            3. Presence of at least 1 INSULIN THERAPY (HCPCS) procedure in the past 12 months
            4. Presence of at least 1 HBA1C VALUE > 7.5 in the past 12 months

Diabetes Validation Exclusion

One of the following is correct:
1. Presence of 2 STEROID-INDUCED DM diagnosis in the past 12 months
2. All of the following are correct:
    - Presence of at least 2 GESTATIONAL DM/POLYCYSTIC OVARIES diagnosis in the past 12 months
    - Female gender

Antiplatelet Agent Contraindications Validation:

One of the following is correct:

1. Presence of at least 1 HEMORRHAGE/CONTRAINDICATIONS diagnosis in the past 6 months
2. Presence of at least 1 HEMORRHAGE/PROCEDURES procedure in the past 12 months
3. Presence of at least 1 NEUTROPENIA diagnosis in the past 6 months
4. Presence of at least 1 HEMATOCRIT labs result value < 25 in the past 6 months
5. Presence of at least 1 INR labs result value > 1.6 in the past 6 months
6. Presence of at least 1 PLATELET COUNT labs result value < 50 in the past 6 months
7. Presence of at least 1 WBC MONITORING labs result value < 2 in the past 6 months
8. Presence of at least 1 COAGULOPATHIES- BLEEDING DISORDERS diagnosis in the past 6 months
9. Presence of patient data confirming at least 1 PDD- ANTIPLATELET INTOLERANCE in the past
10. Presence of at least 1 THROMBOCYTOPENIA diagnosis in the past 6 months

Antiplatelet Agent Alternatives Validation:

1. Presence of at least 1 refill WARFARIN in the past 3 months
2. Presence of patient data confirming at least 1 refill WARFARIN in the past 6 months
3. Presence of patient data confirming at least 1 PDD- WARFARIN USE in the past 6 months
4. Presence of at least 1 LONG-TERM ANTICOAGULATION diagnosis in the past 12 months

Note: A 3 month time window has been added to certain timeframes in order to account for the inherent delay in the acquisition of administrative claims data.

Note: A current refill is defined as a refill in which the day supply of a drug extends into the end of the measurement window plus a grace period of 30 days.