Physician Consortium for Performance Improvement

Clinical Performance Measures

Adult Diabetes

Tools Developed by Physicians for Physicians

Provided by:

Physician Consortium for Performance Improvement

Purpose

This measurement tool provides physicians with *evidence-based*[1] clinical performance measures, including a data collection flowsheet, that may be useful for quality improvement activities within physician practices. The measures and flowsheet are intended for prospective data collection only. The ability to track changes over time is integral to the concept of continuous quality improvement in patient care. Evidence-based clinical performance measures have been identified as a means for tracking these changes.

This measurement tool is provided by the **Physician Consortium for Performance Improvement (The Consortium).** The Consortium is a physician-led initiative that includes methodological experts, clinical experts representing more than 50 national medical specialty societies, state medical societies, the Agency for Healthcare Research and Quality, and the Centers for Medicare and Medicaid Services. The Consortium's vision is to fulfill the responsibility of physicians to patient care, public health, and safety by becoming the leading source organization for evidence-based clinical performance measures and outcomes reporting tools for physicians.

The measures provided are a subset of those defined by the **National Diabetes Quality Improvement Alliance (Alliance).** The newly formed Alliance is a collaboration of 13 public and private national organizations dedicated toward the improvement of diabetes care. In a major advance for standardization in national quality improvement efforts, The Consortium's diabetes measures for quality improvement were recently integrated into the measurement set of the Alliance, which also includes measures for public reporting. In addition, the National Quality Forum has endorsed these measures.

Performance measures must be designed based on their intended purpose.[2,3] The measures presented here are intended to facilitate individual physician quality improvement. Therefore, there are no minimum sample size requirements, and the suggested feedback is sufficiently detailed to pinpoint areas of concern for the physician (eg, all A1c test values per patient). The measures defined in this measurement tool are not intended, and should not be used, for physician comparison.[4]

Performance measures are not clinical guidelines; rather, measures are derived from evidence-based clinical guidelines and indicate whether or not or how often a process or outcome of care occurs.[2] Performance measures provide important information to a physician, allowing him or her to enhance the quality of care delivered to patients.

Statistics on Adult Diabetes

Diabetes is a serious chronic illness with a considerable and increasing impact on the nation's health. An estimated 17 million people – about 6.2% of the US population – have diabetes, and about one-third of these individuals are unaware of it.[5]

- Approximately 1 million American adults, aged 20 years or older, are diagnosed with diabetes each year.[5]
- Adults with diabetes are 2 to 4 times more likely to have heart disease than adults without diabetes.[5]
- Diabetes is the leading cause of end-stage renal disease, accounting for about 43% of new cases.[5]
- The total direct and indirect costs of diabetes in the United States are estimated at more than $98 billion annually.[5]

Statistics on Current Practice

Despite potential risks and established clinical guidelines, recent data suggest that some patients are not being managed optimally for this disease. It has been reported that in some states:

- As many as 35% of Medicare patients with diabetes do not receive at least one A1c test per year.[6]
- As many as 41% of Medicare patients with diabetes do not receive a lipid profile at least every two years.[6]
- Approximately 43% of health plan enrollees with diabetes do not receive recommended yearly eye examinations.[7]

Selected Evidence-Based Clinical Guidelines

Evidence-based clinical practice guidelines are available for the management of adult diabetes. This measurement set is based on clinical guidelines from the following:

- American Academy of Ophthalmology[8]
- American Association of Clinical Endocrinologists/American College of Endocrinology (AACE/ACE)[9-10]
- American Diabetes Association (ADA)[11-17]
- American Optometric Association[18]
- Centers for Disease Control and Prevention – Advisory Committee on Immunization Practices[19]
- National Cholesterol Education Program – ATP III[20]
- National Heart, Lung, and Blood Institute – JNC VI[21]
- National Kidney Foundation[22]

The performance measures found in this document have been developed in agreement with these guidelines, enabling the physician to track his or her performance in individual patient care and across patient populations. *Please note that treatment must be based on individual patient needs and professional judgment.*

For more information and updates, including a list of practicing physicians and other experts who developed this measurement tool, please visit The Consortium's Web site

www.ama-assn.org/go/quality

Relevant Physician Specialties, Patient Population, and Settings of Care

These performance measures are designed for:

- Use by any physician who manages the ongoing care of patients with Type 1 and Type 2 diabetes, aged 18 to 75 years.
- Prospective data collection in the office-based practice setting only.

Physician Consortium for Performance Improvement
Adult Diabetes Core Physician Performance Measurement Set[a]

	Clinical Recommendations/ Treatment Goals	Clinical Performance Measures Per Reporting Year	
A1c Management	A glycosylated hemoglobin (A1c) is recommended during an initial assessment and during follow-up assessments.[9,11] (Level-E Evidence)[11] *Treatment Goals:* AACE/ACE: A1c ≤ 6.5%[9] ADA: A1c ≤ 7%[11]	Percentage of patients who received one or more A1c test(s) **Numerator** = Patients who received one or more A1c test(s) **Denominator** = All patients diagnosed with diabetes	
		Per Patient: Number of A1c tests received Trend of A1c values	*Per Patient Population:* Percentage of patients who received one or more A1c test(s) Distribution of number of tests done (0, 1, 2, 3 or more) Distribution of most recent A1c value by range: <6.0%, 6.0-6.9%, 7.0-7.9%, 8.0-8.9%, 9.0-9.9%, ≥10%, undocumented
Lipid Management	A fasting lipid profile is recommended during an initial assessment and during follow-up assessments.[10,11] (Level-E Evidence)[11] *Treatment Goals:* NCEP[20]: Total cholesterol <200 mg/dl LDL cholesterol <100 mg/dl Triglycerides <150 mg/dl	Percentage of patients who received at least one lipid profile (or ALL component tests) **Numerator** = Patients who received at least one lipid profile (or ALL component tests) **Denominator** = All patients diagnosed with diabetes	
		Per Patient: Trend of values for each test	*Per Patient Population:* Percentage of patients who received at least one lipid profile (or ALL component tests) Distribution of most recent test values by range (mg/dl): Total cholesterol: ≥240, 200-239, <200, undocumented LDL cholesterol[b]: ≥160, 130-159, 100-129, <100, undocumented HDL cholesterol: <40, 40-49, 50-59, ≥60, undocumented Triglycerides: ≥400, 200-399, <200, 150-199, <150, undocumented
Urine Protein Screening	A urinalysis, including microalbuminuria and creatinine clearance, is recommended as part of an initial assessment and annually thereafter.[9-12,22] (Level-E Evidence)[12]	Percentage of patients who received any test for microalbuminuria **Numerator** = Patients who received any test for microalbuminuria Percentage of patients with no urinalysis OR urinalysis with negative or trace urine protein, who received a test for microalbumin **Numerator** = Patients with no urinalysis OR urinalysis with negative or trace urine protein, who received a test for microalbumin **Denominator** (both measures) = All patients diagnosed with diabetes	
		Per Patient: Whether or not patient received any test for microalbuminuria If no urinalysis OR urinalysis with negative or trace urine protein, a test for microalbumin was received	*Per Patient Population:* Percentage of patients who received any test for microalbuminuria Percentage of patients with no urinalysis OR urinalysis with negative or trace urine protein, who received a test for microalbumin
Eye Examination	A dilated eye exam is recommended during an initial assessment and at least annually thereafter.[8,9,13,18] (Level-B Evidence)[13]	Percentage of patients who received a dilated retinal eye exam by an ophthalmologist or optometrist **Numerator** = Patients who received a dilated retinal eye exam by an ophthalmologist or optometrist Percentage of patients who received a funduscopic photo with interpretation by an ophthalmologist or optometrist **Numerator** = Patients who received a funduscopic photo with interpretation by an ophthalmologist or optometrist **Denominator** (both measures) = All patients diagnosed with diabetes	
		Per Patient: Whether or not patient received a dilated retinal eye exam by an ophthalmologist or optometrist Whether or not patient received a funduscopic photo with interpretation by an ophthalmologist or optometrist	*Per Patient Population:* Percentage of patients who received a dilated retinal eye exam by an ophthalmologist or optometrist Percentage of patients who received a funduscopic photo with interpretation by an ophthalmologist or optometrist

a Refers to patients with Type 1 and Type 2 diabetes, aged 18 to 75 years. National Diabetes Quality Improvement Alliance.

b If Non-HDL cholesterol is reported, record the test values in the following ranges (mg/dl): ≥190, 160-189, 130-159, <130, undocumented.

Physician Consortium for Performance Improvement
Adult Diabetes Core Physician Performance Measurement Set[a]

	Clinical Recommendations/ Treatment Goals	Clinical Performance Measures Per Reporting Year	
Foot Examination *Denominator Exclusion:* Patients with bilateral foot amputation	A foot exam—visual inspection, sensory exam, and pulse exam—is recommended during an initial assessment and during follow-up assessments.[9,14]	Percentage of patients who received at least one complete foot exam (visual inspection, sensory exam with monofilament, and pulse exam) **Numerator** = Patients who received at least one complete foot exam (visual inspection, sensory exam with monofilament, and pulse exam) **Denominator** = All patients diagnosed with diabetes	
		Per Patient: Whether or not patient received at least one complete foot exam (visual inspection, sensory exam with monofilament, and pulse exam)	*Per Patient Population:* Percentage of patients who received at least one complete foot exam (visual inspection, sensory exam with monofilament, and pulse exam)
Influenza Immunization *Denominator Exclusion:* 1) Documentation of medical reason(s) for not receiving influenza immunization (eg, allergy to eggs, drug interaction, contraindication); 2) Documentation of patient reason(s) for not receiving influenza immunization (eg, economic, social, religious)	Influenza immunization is recommended for any person 6 months of age or older who, because of age or underlying medical condition, is at increased risk for influenza-related complications, which includes patients with diabetes.[15,19] (Level-C Evidence)[15]	Percentage of patients who received an influenza immunization during the recommended calendar period **Numerator** = Patients who received an influenza immunization during the recommended calendar period **Denominator** = All patients diagnosed with diabetes (both denominator exclusions apply) Percentage of eligible patients who received an immunization or refused immunization during the calendar period **Numerator** = Patients who received an immunization or refused immunization during the calendar period **Denominator**= All patients diagnosed with diabetes (only 1st denominator exclusion applies)	
		Per Patient: Immunization status	*Per Patient Population:* Percentage of patients who received an influenza immunization during the recommended calendar period Percentage of eligible patients who received an immunization or refused immunization during the calendar period
Blood Pressure Management	A blood pressure determination is recommended during an initial assessment and follow-up assessments.[9,11,21,22] (Level-E Evidence)[11] Treatment Goals: ADA: <130/80 mm Hg[11] JNC VI: <130/85 mm Hg[21]	No clinical performance measure but data collection is recommended	
		Per Patient: Most recent systolic and diastolic blood pressure reading	*Per Patient Population:* Distribution of most recent blood pressure values by range (mm Hg): **Systolic:** <120, 120-129, 130-139, 140-149, 150-159, 160-169, 170-179, ≥180, undocumented **Diastolic:** <75, 75-79, 80-89, 90-99, 100-109, ≥110, undocumented
Aspirin Use *Denominator Exclusion:* Documentation that aspirin therapy was not indicated (eg, aged <40 years old); documentation of medical reason(s) for not prescribing aspirin therapy (eg, allergy, contraindication); documentation of patient reason(s) for not prescribing aspirin therapy (eg, economic, social, religious)	The use of aspirin therapy in all adult patients aged <40 years with diabetes is recommended.[9,11,16] (Level-A Evidence)[16]	Percentage of patients who were prescribed aspirin therapy (dose ≥ 75 mg) **Numerator** = Patients who were prescribed aspirin therapy (dose ≥ 75 mg) **Denominator** = All patients diagnosed with diabetes	
		Per Patient: Whether or not patient was prescribed aspirin therapy (dose ≥ 75 mg)	*Per Patient Population:* Percentage of patients who were prescribed aspirin therapy (dose ≥75 mg)
Smoking Cessation	Smoking cessation is recommended as part of optimal care of the patient with diabetes.[9,11,17] (Level-A Evidence)[17]	Percentage of patients who are smokers **Numerator** = Patients who are smokers Percentage of patients who were assessed for smoking status **Numerator** = Patients who were assessed for smoking status Percentage of smokers who were recommended or offered an intervention for smoking cessation (ie, counseling or pharmacologic therapy) **Numerator** = Smokers who were recommended or offered an intervention for smoking cessation **Denominator** (all three measures) = All patients diagnosed with diabetes	
		Per Patient: Whether or not patient was assessed for smoking status Whether or not patient identified as smoker was recommended or offered an intervention for smoking cessation (ie, counseling or pharmacologic therapy)	*Per Patient Population:* Percentage of patients who are smokers Percentage of patients who were assessed for smoking status Percentage of smokers who were recommended or offered an intervention for smoking cessation (ie, counseling or pharmacologic therapy)

Physician Consortium for Performance Improvement
Adult Diabetes Core Physician Performance Measurement Set
Prospective Data Collection Flowsheet

Provider No. _____ **Patient Name or Code** _____ **Birth Date** ____ / ____ / _____ **Gender M ❑ F ❑**
Treatment (Select all that apply): Diet ❑ Oral Agent ❑ Insulin ❑ **(mm/dd/yyyy)**

		Initial Measurement	Subsequent Measurements			
	Date of Visit (mm/dd/yyyy)	_____/_____/_____	_____/_____/_____	_____/_____/_____	_____/_____/_____	_____/_____/_____
	Blood Pressure	L R _____ sitting supine standing	L R _____ sitting supine standing	L R _____ sitting supine standing	L R _____ sitting supine standing	L R _____ sitting supine standing
Laboratory	**Hemoglobin A1c (%)**					
	Lipid Profile (mg/dl)					
	Fasting (Yes/No)	Y or N	Y or N	Y or N	Y or N	Y or N
	Total Cholesterol					
	HDL-C					
	LDL-C					
	Triglycerides					
	Urine Protein					
	Patient Excluded (Yes/No)[a]	Y or N	Y or N	Y or N	Y or N	Y or N
	Urinalysis (Dipstick) Positive/Negative (or trace)	P or N	P or N	P or N	P or N	P or N
	Microalbumin Dipstick (Yes/No)	Y or N	Y or N	Y or N	Y or N	Y or N
	Quantitative Microalbumin Determination (Yes/No)	Y or N	Y or N	Y or N	Y or N	Y or N
Preventative Care	**Influenza Vaccination**	Given ___/___/____ ❑ Not given (medical reasons*) ❑ Not given (patient reasons*)	Given ___/___/____ ❑ Not given (medical reasons*) ❑ Not given (patient reasons*)	Given ___/___/____ ❑ Not given (medical reasons*) ❑ Not given (patient reasons*)	Given ___/___/____ ❑ Not given (medical reasons*) ❑ Not given (patient reasons*)	Given ___/___/____ ❑ Not given (medical reasons*) ❑ Not given (patient reasons*)
	Foot Examination[b] Yes/No/Excluded[c]	Y or N / E	Y or N / E	Y or N / E	Y or N / E	Y or N / E
		Date Performed	**Date Performed**	**Date Performed**	**Date Performed**	**Date Performed**
	Dilated Retinal Eye Exam	_____/_____/_____ ❑ Report received	_____/_____/_____ ❑ Report received	_____/_____/_____ ❑ Report received	_____/_____/_____ ❑ Report received	_____/_____/_____ ❑ Report received
	Funduscopic Photograph[d]	_____/_____/_____ ❑ Report received	_____/_____/_____ ❑ Report received	_____/_____/_____ ❑ Report received	_____/_____/_____ ❑ Report received	_____/_____/_____ ❑ Report received
	Smoking	Y or N	Y or N	Y or N	Y or N	Y or N
	Smoker (Yes/No)					
	Counseling	Y or N	Y or N	Y or N	Y or N	Y or N
	Pharmacologic	Y or N	Y or N	Y or N	Y or N	Y or N
Aspirin Use	**Aspirin Use[e]**	❑ Prescribed ❑ Not prescribed (medical reasons*) ❑ Not prescribed (patient reasons*)	❑ Prescribed ❑ Not prescribed (medical reasons*) ❑ Not prescribed (patient reasons*)	❑ Prescribed ❑ Not prescribed (medical reasons*) ❑ Not prescribed (patient reasons*)	❑ Prescribed ❑ Not prescribed (medical reasons*) ❑ Not prescribed (patient reasons*)	❑ Prescribed ❑ Not prescribed (medical reasons*) ❑ Not prescribed (patient reasons*)

*Specify medical (eg, influenza vaccination not given due to allergy to eggs) or patient (eg, economic, social, religious) reasons for not prescribing therapy:

[a] Because of ESRD or gross proteinuria
[b] Examination includes visual inspection, sensory exam with monofilament, and pulse exam
[c] Because of bilateral foot amputation
[d] Examination includes interpretation by an ophthalmologist or optometrist, see clinical recommendations
[e] Excludes patients <40 years, aspirin contraindication/allergy

This flowsheet is intended for prospective data collection only.

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