

Breakthrough Measures of Diabetes Population HDC 2006

Each Breakthrough diabetes team is required to track the core national measures (measures 1 through 6) along with the count of patients with DM tracked by the clinical information system. "Patients with DM" is defined as patients with the diagnosis of diabetes, Type 1 and Type 2 (ICD-9 code of 250.00-250.99). ICD-9 codes are not always accurate, however; and organizations are reminded that clinical judgment should subsequently take precedence when selecting patients to include in a specific diagnostic category. For clinic systems with an integrated dental clinic, measure #13 is also required. Teams are welcome to track any of the additional measures (7-16) as useful to their work.

REQUIRED MEASURES				
Measure	Definition	Data Gathering Plan	Goal	Notes/Comments
1. Average HbA1c	Average HbA1c value for diabetic patients in the clinical information system	On the last workday of each month, search the clinical information system for all patients with a diagnosis of DM who have had an HbA1c in the past 12 months. Add all of these patients' most recent HbA1c values together and divide by the number of such persons.	<7.0 %	If many patients in the clinical information system do not have at least one HbA1c, then this measure may not give a useful estimate of population average. Thus, we require teams to report the number of patients for whom an HbA1c within the past 12 months has been documented. The goal < 7% for average HbA1c derives from current ADA guidelines for individual patients. Reference 8.
2. Patients with 2 HbA1c's in last year (at least 3 months apart)	The number of diabetic patients in the clinical information system who have had two HbA1c's (at least 91 days apart) in the last 12 months, divided by the total number of diabetic patients in the clinical information system. Multiply by 100 to get percentage	On the last workday of each month, search the clinical information system for all patients with a diagnosis of DM who have had two HbA1c's within the last 12 months (at least 91 days apart). At the same time, count the number of patients in the clinical information system.	>90%	Reference 8

3. Documentation of self-management goal setting	The number of diabetic patients in the clinical information system with documented self-management goals in the last 12 months divided by the total number of diabetic patients in the clinical information system. Multiply by 100 to get percentage.	On the last workday of each month, search the clinical information system for all patients with a diagnosis of DM who have documented self-management goals set with a clinician in the past 12 months. At the same count the number of patients in the clinical information system.	>70%	References 11-16
You must choose one of the Cardiac Risk Reduction measures (statins, ACE/ARBs or Aspirin/Antithrombotics) to report monthly				
4. Cardiac Risk Reduction Option 1: Statins	The number of diabetic patients in the clinical information system 40 years and older who have a current prescription for statins divided by the number of diabetic patients 40 years and older in the clinical information system. Multiply by 100 to get percentage.	On the last workday of each month, search the clinical information system for all patients 40 years and older with a diagnosis of DM who have a current prescription for statins. At the same time count the number of patients with a diagnosis of DM 40 years and older in the clinical information system.	>60%	The statin recommendation is based on the Heart Protection Study. References 2 and 21.
4. Cardiac Risk Reduction Option 2: ACE inhibitors or ARB medication	The number of diabetic patients in the clinical information system 55 years and older who have a current prescription for ACE inhibitors or ARB medication divided by the number of diabetic patients 55 years and older in the clinical information system. Multiply by 100 to get percentage.	On the last workday of each month, search the clinical information system for all patients 55 and older with a diagnosis of DM who have a current prescription for ACE inhibitors or ARB medication. At the same time count the number of patients with a diagnosis of DM 55 years and older in the clinical information system.	>75%	We believe usual practice ought to be a test of an ACE and if ACE is not tolerated, then try an ARB. In some cases, ARB will be first choice but because of cost of medication, ACEs ought to be a common starting point. ACEI/ARB option is based primarily on the HOPE trial Reference 1

4. Cardiac Risk Reduction Option 3: Aspirin or other antithrombotic Agent	The number of DM patients 40 years and older and in the clinical information system who have a current prescription for aspirin or other antithrombotic agent divided by the total number of diabetic patients 40 years and older in the clinical information system. Multiply by 100 to get percentage.	On the last workday of each month, search the clinical information system for all patients 40 years and older with a diagnosis of DM and who have a current prescription for aspirin or other antithrombotic agent. At the same time count the total number of patients 40 years and older with a diagnosis of DM and years old in the clinical information system.	>80%	Reference 8, 29 Suitable agents include Warfarin/Coumadin, Plavix (clopidogrel), Ticlid (ticlopidine), low molecular weight heparin, and any newer agents that may become available that are shown to be equivalent or superior to the existing medications.
5. Patients with BP <130/80	The number of diabetic patients in the clinical information system with blood pressure reading less than 130/80 at last reading within the past 12 months, divided by the diabetic patients in the clinical information system with a documented blood pressure in the last 12 months. Multiply by 100 to get percentage.	On the last workday of each month, search the clinical information system for all patients with a diagnosis of DM with a BP < 130/80 in the last 12 months. At the same time count the total number of patients with a diagnosis of DM who have a documented blood pressure in the clinical information system in the last 12 months.	>40%	The 130/80 cut-off changed from earlier years. UKPDS References 3 & 4 and HOT Trial Reference 5 justify (lower the better) and ADA clinical guidelines were changed several years ago to reflect this. See also current guidelines References 6,7,8 Teams should strive to document blood pressure for at least 90% of their clinical information system patients.
6. Patients with LDL < 100	The number of diabetic patients in the clinical information system whose most recent fasting LDL was less than 100 (in the last 12 months), divided by the number of patients with a fasting LDL in the past 12 months. Multiply by 100 to get percentage.	On the last workday of each month, search the clinical information system for all patients with a diagnosis of DM whose most recent fasting LDL was less than 100 (in the last 12 months.) At the same time, count the number of patients with a diagnosis of DM who have had a fasting LDL in the last 12 months.	>70%	Cut-off of 100 aligns with ADA guidelines since 2000 References 7, 8; National Cholesterol Education Program (NCEP) Adult Treatment Panel III guidelines from 2001 Reference 9 and update, Reference 23.

For clinic systems with an integrated dental clinic, the following measure is also required:				
13. Dental exam in past year	The number of patients in the clinical information system who obtained a dental exam in last 12 months, divided by the total number of diabetic patients in the clinical information system. Multiply by 100 to get percentage.	On the last workday of each month, search the clinical information system for all patients with a diagnosis of DM who have had a documented dental exam in the last 12 months. At the same time count the total number of patients with a diagnosis of DM in the clinical information system.	>70%	Effective treatment of periodontal infection and reduction of periodontal inflammation is associated with a reduction in glucose blood levels. Early detection during regular dental examinations is very important. Reference 20

ADDITIONAL RECOMMENDED MEASURES: Your team may choose to track and report on any of these additional measures. These measures can be used to enhance care and increase the ability to achieve the required measures above

Measure	Definition	Data Gathering Plan	Goal	Notes/Comments
7. Patients who are current smokers	The number of patients in the registry who are current smokers (documented within the last 12 months), divided by the total number of DM patients in the registry with smoking status documented within the last 12 months. Multiply by 100 to get percentage.	On the last workday of each month, search the registry for all patients with DM who are current smokers (documented within the last 12 months). At the same time count the total number of patients with DM in the registry with smoking status documented within the last 12 months.	<12%	Healthy People 2010 Clinical Practice Guideline for treating tobacco use and dependence Ref. 14 (Note: PECS versions 2.x reported "current smokers" on registry summary reports but in fact based calculations on tobacco use. PECS version 3 will align calculation with the label on the registry summary report.)
8. Dilated eye exam in past year	The number of patients in the clinical information system who have had a dilated eye exam in the last 12 months, divided by the total number of diabetic patients in the clinical information system. Multiply by 100 to get percentage.	On the last workday of each month, search the clinical information system for all patients with a diagnosis of DM who have had a dilated eye exam in the last 12 months. At the same time count the total number of patients with a diagnosis of DM in the clinical information system.	> 70%	Reference 8
9. Comprehensive foot exam in the past year	The number of patients in the clinical information system who have had an annual comprehensive foot exam documented in the last 12 months, divided by the total number of diabetic patients in the clinical information system. Multiply by 100 to get percentage.	On the last workday of each month, search the clinical information system for all patients with a diagnosis of DM who have had a documented comprehensive annual foot exam in the last 12 months. At the same time count the total number of patients with a diagnosis of DM in the clinical information system.	>90%	An annual comprehensive foot exam has been part of ADA guidelines for some time (LEAP exam is one type.) This examination should include assessment of protective sensation, foot structure and biomechanics, vascular status, and skin integrity. Reference 8

10. Microalbuminuria screening in past year	The number of patients in the clinical information system 12 years and older but less than 70 years of age who are not already on ACEI or ARB and have had a microalbuminuria screening test in the last 12 months, divided by the total number of diabetic patients in the clinical information system 12 years and older but less than 70 years of age who are not already on ACEI or ARB. Multiply by 100 to get percentage.	On the last workday of each month, search the clinical information system for all patients with a diagnosis of DM between 12 years and older but less than 70 years of age who are not on ACEI or ARB and who have had a microalbuminuria screening test in the last 12 months. At the same time count the total number of patients with a diagnosis of DM in the clinical information system who are 12 years and older but less than 70 years of age and who are not on ACEI or ARB.	>50%	Reference 8. Screening may be accomplished by several different tests. Albumin/creatinine ratio test is the preferred test. This is the test item specifically measured in the PECS summary report for this measure Reference 10 discusses microalbuminuria screening for adults and children with diabetes.
11. Influenza vaccination	The number of patients in the clinical information system who obtained an Influenza vaccination in last 12 months, divided by the total number of diabetic patients in the clinical information system. Multiply by 100 to get percentage.	On the last workday of each month, search the clinical information system for all patients with a diagnosis of DM who obtained an Influenza vaccination in last 12 months. At the same time count the total number of patients with a diagnosis of DM in the clinical information system.	>90%	Reference 8.
12. One pneumococcal vaccine	The number of patients in the clinical information system who have had one pneumococcal vaccination at any time, divided by the total number of diabetic patients in the clinical information system. Multiply by 100 to get percentage.	On the last workday of each month, search the clinical information system for all patients with a diagnosis of DM who have had one pneumococcal vaccination at any time in the past. At the same time count the total number of patients with a diagnosis of DM in the clinical information system.	>90%	Reference 8.

13. Dental exam in past year	The number of patients in the clinical information system who obtained a dental exam in last 12 months, divided by the total number of diabetic patients in the clinical information system. Multiply by 100 to get percentage.	On the last workday of each month, search the clinical information system for all patients with a diagnosis of DM who have had a documented dental exam in the last 12 months. At the same time count the total number of patients with a diagnosis of DM in the clinical information system.	>70%	Note: Clinic systems with an integrated dental clinic MUST choose this measure AND one other measure. Reference 20
14. Depression Screening (12 months)	The # of patients with a documented screening for depression in the past 12 months <i>divided by</i> the # of patients in the clinical information system. Multiply by 100 to get percent.	On the last day workday of each month from the clinical information system: count the # of patients with a documented screening for depression in the past 12 months; count the total # of patients in the clinical information system.	>50%	Depression is probably the most common mental disorder in primary care practice. Because depressed patients in primary care settings commonly present with somatic symptoms rather than complaints of depressed mood, clinicians must be proficient in the assessment and management of depression. The skillful differential diagnosis of depressive symptoms is essential because major depression commonly presents as an associated problem in patients with other physical illnesses. References 17-19
15. Exercise	The number of DM patients whose last documented exercise rate (within the last 12 months) was 3Xweek @ least 20 minutes, divided by the total number of DM patients. Multiply by 100 to get a percentage.	On the last workday of each month, search the clinical information system for all DM patients whose last documented exercise rate (within the last 12 months) was 3Xweek @ least 20 minutes. At the same time count the total number of DM patients.	>60%	ADA Guidelines, Ref. 8. Exercise and physical activity in the prevention and treatment of atherosclerotic cardiovascular disease, ref. 24; Behavioral counseling in primary care promote physical activity, Ref. 25.

16. Weight Reduction	The number of DM patients with a BMI >25 at any time in the last 12 months who have lost 10 pounds (by comparing their maximum recorded weight in the 12 months period to their latest recorded weight), divided by the total number of DM patients who have or had a BMI > 25 at any time in the last 12 months. Multiply by 100 to get a percentage.	On the last workday of each month, search the clinical information system for all DM patients with a BMI >25 at any time in the last 12 months who have lost 10 pounds (by comparing their maximum recorded weight in the 12 months period to their latest recorded weight). At the same time count the total number of DM patients who have or had a BMI > 25 at any time in the last 12 months.	>30%	ADA Guidelines, Ref 8; Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults Ref. 26-28.
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