

Diabetes: HbA1c Control (<8%) (NQF 0575)

EMeasure Name	Diabetes: HbA1c Control < 8%	EMeasure Id	Pending
Version Number	1	Set Id	Pending
Available Date	No information	Measurement Period	January 1, 20xx through December 31, 20xx
Measure Steward	National Committee for Quality Assurance		
Endorsed by	National Quality Forum		
Description	The percentage of patients 18–75 years of age with diabetes (type 1 or type 2) who had HbA1c <8.0%.		
Measure scoring	Proportion		
Measure type	Process		
Rationale	<p>This measure evaluates the percentage of patients in a specific age demographic who were diagnosed with type 1 or type 2 diabetes and who demonstrate adequate blood sugar control with an HbA1c level lower than 8 percent. Diabetes mellitus (diabetes) is a group of diseases characterized by high blood glucose levels caused by the body’s inability to correctly produce or utilize the hormone insulin. It is recognized as a leading cause of death and disability in the U.S. and is highly underreported as a cause of death. Diabetes of either type may cause life-threatening, life-ending or life-altering complications, including poor blood sugar control. Studies have shown that improved glycemic control is correlated with a 40% decline in the development of associated microvascular complications (i.e., eye, kidney and nerve diseases)(ADA 2009). Clinical guidelines recommend regular HbA1c testing to facilitate patients’ ability to improve and sustain acceptable levels (ADA 2009). This measure facilitates the maintenance and long-term management of adequate blood sugar levels for patients diagnosed with diabetes.</p>		
Clinical Recommendation Statement	<p>American Geriatric Society:</p> <ul style="list-style-type: none"> • For frail older adults, persons with life expectancy of less than 5 years, and others in whom the risks of intensive glycemic control appear to outweigh the benefits, a less stringent target such as 8% is appropriate. (Level III, Grade B) • For older persons, target hemoglobin A1C should be individualized. A reasonable goal for A1C in relatively healthy adults with good functional status is 7% or lower. (Level III, Grade B) <p>American Diabetes Association:</p> <ul style="list-style-type: none"> • Lowering A1C to below or around 7% has been shown to reduce microvascular and neuropathic complications of type 1 and type 2 diabetes. Therefore, for microvascular disease prevention, the A1C goal for nonpregnant adults in general is <7%. (A) • In type 1 and type 2 diabetes, randomized controlled trials of intensive versus standard glycemic control have not shown a significant reduction 		

	<p>in CVD outcomes during the randomized portion of the trials. Long-term follow-up of the Diabetes Control and Complications Trial (DCCT) and UK Prospective Diabetes Study (UKPDS) cohorts suggests that treatment to A1C targets below or around 7% in the years soon after the diagnosis of diabetes is associated with long-term reduction in risk of macrovascular disease. Until more evidence becomes available, the general goal of <7% appears reasonable for many adults for macrovascular risk reduction. (B)</p> <ul style="list-style-type: none"> • Subgroup analyses of clinical trials such as the DCCT and UKPDS and the microvascular evidence from the ADVANCE (Action in Diabetes and Vascular Disease: Preterax and Diamicron MR Controlled Evaluation) trial suggest a small but incremental benefit in microvascular outcomes with A1C values closer to normal. Therefore, for selected individual patients, providers might reasonably suggest even lower A1C goals than the general goal of <7%, if this can be achieved without significant hypoglycemia or other adverse effects of treatment. Such patients might include those with short duration of diabetes, long life expectancy, and no significant CVD. (B) • Conversely, less stringent A1C goals than the general goal of <7% may be appropriate for patients with a history of severe hypoglycemia, limited life expectancy, advanced microvascular or macrovascular complications, and extensive comorbid conditions and those with longstanding diabetes in whom the general goal is difficult to attain despite diabetes self-management education, appropriate glucose monitoring, and effective doses of multiple glucose lowering agents including insulin. (C)
References	<p>Guidelines for Improving the Care of the Older Person with Diabetes Mellitus. California Healthcare Foundation/American Geriatrics Society Panel on Improving Care for Elders with Diabetes. American Geriatrics Society. May 2003 – Vol. 51, No. 5 Supplement, JAGS.</p> <p>Standards of Medical Care in Diabetes – 2009. <i>Diabetes Care</i> January 2009 32:S6-S12; doi: 10.2337/dc09-S006</p>
Definitions	

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Please refer to the spreadsheet for this measure for detail regarding data criteria and code lists.

Population criteria

- **Initial Patient Population =**

- AND: “Patient characteristic: birth date” (age) ≥ 17 years and ≤ 74 years to capture all patients who will reach the ages between 18 and 75 years during the “measurement period”;
- **Denominator =**
 - AND: All patients in the initial patient population;
 - AND:
 - OR: “medication dispensed: medications indicative of diabetes” ≤ 2 years before or simultaneously to “measurement end date”;
 - OR: “medication order: medications indicative of diabetes” ≤ 2 years before or simultaneously to “measurement end date”;
 - OR: “medication active: medications indicative of diabetes” ≤ 2 years before or simultaneously to “measurement end date”;
 - OR:
 - AND: “Diagnosis active: diabetes” ≤ 2 years before or simultaneously to “measurement end date”;
 - AND:
 - OR: ≥ 1 count(s) of “Encounter: encounter acute inpatient or ED”;
 - OR: ≥ 2 count(s) of “Encounter: encounter non-acute inpt, outpatient, or ophthalmology” occurring on 2
- **Numerator =**
 - AND: “Laboratory test result: HbA1c test”, MOST RECENT value $< 8.0\%$;
- **Exclusions =**
 - OR:
 - AND: “Diagnosis active: polycystic ovaries”;
 - AND NOT:
 - AND: “Diagnosis active: diabetes” ≤ 2 years before or simultaneously to “measurement end date”;
 - AND:
 - OR: “Encounter: encounter acute inpatient or ED” ≤ 2 years before or simultaneously to “measurement end date”;
 - OR: “Encounter: encounter non-acute inpt, outpatient, or ophthalmology” ≤ 2 years before or simultaneously to “measurement end date”;
- OR:

- AND:
 - OR: “Diagnosis active: gestational diabetes” <=2 years before or simultaneously to “measurement end date”;
 - OR: “Diagnosis active: steroid induced diabetes” <=2 years before or simultaneously to “measurement end date”;

- AND:
 - OR: “Medication order: medications indicative of diabetes” <=2 years before or simultaneously to “measurement end date”;
 - OR: “Medication dispensed: medications indicative of diabetes” <=2 years before or simultaneously to “measurement end date”;
 - OR: “Medication active: medications indicative of diabetes” <=2 years before or simultaneously to “measurement end date”;

- AND NOT:
 - AND: “Diagnosis active: diabetes” <=2 years before or simultaneously to “measurement end date”;
 - AND:
 - OR: “Encounter: Encounter acute inpatient or ED” <=2 years before or simultaneously to “measurement end date”;
 - OR: “Encounter: encounter non-acute inpt, outpatient, or ophthalmology” <=2 years before or simultaneously to “measurement end date”;

Data criteria (QDS Data Elements)

- **Initial Patient Population =**
 - “Patient characteristic: birth date” using “birth date code list” before the “measurement period”

- **Denominator =**
 - “Diagnosis active: diabetes” using “diabetes code list grouping” before or simultaneously to the “measurement end date”;
 - “Encounter: encounter acute inpatient or ED” using “encounter acute inpatient or ED code list grouping” during the “measurement period”;
 - “Encounter: encounter non-acute inpt, outpatient, or ophthalmology” using “encounter non-acute inpt, outpatient, or ophthalmology code list grouping” during the “measurement period”;
 - “Medication order: medications indicative of diabetes” using “medications indicative of diabetes code list grouping” before or simultaneously to the “measurement end date”;

- “Medication dispensed: medications indicative of diabetes” using “medications indicative of diabetes code list grouping” before or simultaneously to the “measurement end date”;
- “Medication active: medications indicative of diabetes” using “medications indicative of diabetes code list grouping” before or simultaneously to the “measurement end date”;
- **Numerator =**
 - “Laboratory test result: HbA1c test” using “HbA1c test code list grouping” during the “measurement period”;
- **Exclusions =**
 - “Diagnosis active: polycystic ovaries” using “polycystic ovaries code list grouping” before or simultaneously to the “measurement end date”;
 - “Diagnosis active: gestational diabetes” using “gestational diabetes code list grouping” before or simultaneously to the “measurement end date”;
 - “Diagnosis active: steroid induced diabetes” using “steroid induced diabetes code list grouping” before or simultaneously to the “measurement end date”;

Summary calculation

Calculation is generic to all measures:

- Calculate the final denominator by adding all that meet denominator criteria.
- Subtract from the final denominator all that do not meet numerator criteria yet also meet exclusion criteria. Note some measures do not have exclusion criteria.
- The performance calculation is the number meeting numerator criteria divided by the final denominator.
- For measures with multiple patient populations, repeat this process for each patient population and report each result separately.
- For measures with multiple numerators, calculate each numerator separately within each population using the paired exclusion.

Measure set	CLINICAL QUALITY MEASURE SET 2011-2012
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