

## Health Plan of Michigan Clinical Practice Guideline Management of Diabetes Mellitus

**The following guideline applies to patients with type 1 and type 2 diabetes mellitus and recommends specific interventions for periodic medical assessment, laboratory tests, and education to guide effective patient self-management.**

Eligible Population	Key Components	Recommendation and Level of Evidence	Frequency
Patients 18-75 years of age with type 1 or type 2 diabetes mellitus	Periodic assessment	Assessment should include: <ul style="list-style-type: none"> <li>• Weight, BMI<sup>1</sup></li> <li>• Blood pressure [A] (adult target of <math>\leq 130/80</math>)</li> <li>• Assess cardiovascular risks:                             <ul style="list-style-type: none"> <li>◦ Smoking, hypertension, dyslipidemia, hyperlipidemia, a sedentary lifestyle, obesity, stress, family history and age &gt; 40 years, gender</li> </ul> </li> <li>• Comprehensive foot exam (including monofilament testing annually) [B]</li> <li>• Screen for depression</li> <li>• Dilated eye exam by ophthalmologist or optometrist [B], or digiscope [B]</li> </ul>	At least annually and more frequently as needed
	Laboratory tests and other studies	Tests should include: <ul style="list-style-type: none"> <li>• A1C [D]</li> <li>• Urine microalbumin measurement [D]</li> <li>• Serum creatinine and calculated GFR [D]</li> <li>• Fasting lipid profile</li> </ul>	A1C 2-4 times annually based on individual therapeutic goal <sup>2</sup> ; other tests at least annually.
	Education, counseling, and risk factor modification	<p><b>People with diabetes should receive medical care from a physician-coordinated team:</b></p> <ul style="list-style-type: none"> <li>• Consider referral to diabetes educator if education not provided by physician or practice staff</li> </ul> <p><u>Education should include</u></p> <ul style="list-style-type: none"> <li>• Nutritional counseling, including role of weight in insulin resistance and importance of progress toward ideal body weight</li> <li>• Role of self-monitoring of blood glucose in glycemic control [A]</li> <li>• Cardiovascular risk education</li> <li>• Smoking cessation intervention [B]/secondhand smoke avoidance [C]</li> <li>• Regular physical activity [A]</li> <li>• Self care of feet [B]</li> <li>• Pre-conception counseling [D]</li> <li>• Encourage patient to receive dental care</li> </ul>	At diagnosis as needed
	Medical recommendations	<p><b>Care should focus on smoking, hypertension, lipids, and glycemic control:</b></p> <ul style="list-style-type: none"> <li>• Treatment of hypertension using up to 3-4 anti-hypertensive medications to achieve adult target of &lt; 130 systolic [A] and &lt; 80 diastolic [B]</li> <li>• Prescription of ACE inhibitor or Angiotensin Receptor Blocker (ARB) in patients with hypertension or albuminuria [A]<sup>3</sup></li> <li>• Statin therapy for primary prevention against macrovascular complications in patients with diabetes who are <math>\geq</math> age 40 or who have an LDL-C <math>\geq</math> 100 mg/dl [A]<sup>4</sup></li> <li>• Management of cardiovascular risk factors</li> <li>• Assurance of appropriate immunization status (Tetnus, influenza, pertussis, pneumococcal vaccine) [C]</li> <li>• Anti-platelet therapy [A]: low dose aspirin daily for primary prevention in those at increased cardiovascular risk with type 1 [C] and type 2 [A] diabetes, unless contraindicated<sup>5</sup></li> </ul>	At each visit until therapeutic goals are achieved

<sup>1</sup> BMI = weight (kg)/height squared (m<sup>2</sup>) or (pounds x 703)/inches<sup>2</sup>

<sup>2</sup>Develop or adjust the management plan to achieve normal or near-normal glycemia with an A1C goal of <7%. Less stringent treatment goals may be appropriate for patients with a history of severe hypoglycemia, patients with limited life expectancies, very young children or older adults and individuals with co-morbid conditions. More stringent treatment goals (i.e., a normal A1C < 6%) for individual patients and in pregnancy

<sup>3</sup> Consider referral of patients with serum creatinine value of >2.0 mg/dl (adult value) or persistent albuminuria to nephrologists for evaluation.

<sup>4</sup>Target LDL-C < 100 mg/dl [**B**]. For patients with overt CBD, a lower LDL-C goal of <70 mg/dl is an option [**B**].

<sup>5</sup>Aspirin therapy is not routinely recommended for patients under the age of 21 years because of the increased risk of Reye's syndrome.

**Levels of Evidence for the most significant recommendations:** A=randomized controlled trials; B=controlled trials, no randomization; C=observational studies; D=opinion of expert panel

This guideline lists core management steps. It is based on the 2004 American Diabetes Association Clinical Practice Recommendations ([www.diabetes.org](http://www.diabetes.org)). Individual patient considerations and advances in medical science may supercede or modify these recommendations.

Approved by MQIC Medical Directors July 2006

[www.mqic.org](http://www.mqic.org)