Michigan Quality Improvement Consortium Guideline
Management of Diabetes Mellitus

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

<table>
<thead>
<tr>
<th>Key Components</th>
<th>Recommendation and Level of Evidence</th>
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</thead>
<tbody>
<tr>
<td><strong>Eligible Population</strong></td>
<td>Patients 18-75 years of age with type 1 or type 2 diabetes mellitus</td>
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</table>

**Periodic Assessment**

- Assessment should include:
  - Height, weight, BMI, blood pressure [A]
  - Assess cardiovascular risks (tobacco use, hypertension, dyslipidemia, sedentary lifestyle, obesity, stress, family history, age > 40)
  - Comprehensive foot exam (visual, monofilament, and pulses) [B]
  - Screen for depression [D]
  - Dilated eye exam by ophthalmologist or optometrist TBI, or if no prior retinopathy, may screen with fundal photography TBI

**Laboratory Tests**

- Tests should include:
  - A1C [D]
  - Urine microalbumin measurement [B] (unless already on ACE or ARB)
  - Serum creatinine and calculated GFR [D]
  - Lipid profile [B], preferably fasting
  - Consider TSH and LFTs [D]

- Comprehensive diabetes self-management education and support (DSME and DSMS) from a collaborative team or diabetic educator if available

- Education should be individualized, based on the National Standards for DSME [B] and include:
  - Importance of regular physical activity including interrupting sedentary periods at least every 90 minutes with physical activity, and a healthy diet [A], and working towards an appropriate BMI
  - Assessment of patient knowledge, attitudes, self-management skills and health status; strategies for making health behavior changes and addressing psychosocial concerns [C]
  - Description of diabetes disease process and treatment: safe and effective use of medications; prevention, detection and treatment of acute and chronic complications, including prevention and recognition of hypoglycemia
  - Role of self-monitoring of blood glucose in glycemic control [A]
  - Cardiovascular risk reduction
  - Tobacco cessation intervention [B] and secondhand smoke avoidance [C]
  - Self-care of feet including nail and skin care and appropriate footwear [B]; preconception counseling [D]; encourage patients to receive dental care [D]

**Medical Recommendations**

- Care should focus on tobacco cessation, hypertension, lipids and glycemic control:
  - Medications for tobacco dependence unless contraindicated
  - Treatment of hypertension using up to 3-4 anti-hypertensive medications to achieve adult target of 140/90 mmHg [A] (see MQIC hypertension guideline). Mortality increases if diastolic is < 70.
  - Prescription of ACE inhibitor or angiotensin receptor blocker in patients with chronic kidney disease or albuminuria [A]
  - Moderate intensity statin [4,5] therapy for primary prevention against macrovascular complications (e.g. simvastatin 20-40 mg, atorvastatin 10-20 mg)
  - For patients with overt CVD, high intensity statin (e.g. atorvastatin 40-80 mg)
  - Anti-platelet therapy [A]: low dose aspirin for adults with cardiovascular disease unless contraindicated.
  - Individualize the A1C goal [6]. Goal for most patients is 7-8%. Mortality increases when A1C is > 9% [B]
  - Assurance of appropriate immunization status [Tdap or Td, influenza, pneumococcal vaccine (PCV13 and PPSV23), Hep B] [C]

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1 National Standards (or Diabetes Self-Management Education and Support
2There is no evidence that e-cigarettes are a healthier alternative to smoking or that e-cigarettes can facilitate smoking cessation
3Consider referral of patients with serum creatinine value > 2.0 mg/dl (adult value) or persistent albuminuria to nephrologist for nephropathy evaluation
4Diabetes Care, January 2015
5Cardiovascular Disease and Risk Management
62013 ACC/AHA Blood Cholesterol Guideline Table 5. High-, Moderate-, and Low-Intensity Statin Therapy
7Diabetes Care, Volume 38 Supplement 1. January 2015, S37 Table 5.2

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 American Diabetes Association Standards of Medical Care in Diabetes - 2015; Volume 38. Supplement 1, Pages S1-S93 (http://care.diabetesjournals.org). Individual patient consideration; medical science may supersede or modify these recommendations.