

## Changing Practice to Reduce Diabetes Complications

### Neuropathy

*Diabetes can lead to costly and debilitating complications, including neuropathy, and is a leading cause of nontraumatic lower-limb amputations.*

- Blood pressure control reduces the risk of microvascular complications of diabetes, such as neuropathy, by about 33%. (CDC, 2011)
- A multidisciplinary team approach that included podiatrists most effectively prevented complications from diabetes and reduced the risk of amputation. (Sloan, 2010)

*Changing health systems and provider practices benefits people with diabetes:*

- *Interventions based on the Chronic Care Model* (see below) improved at least 1 process or outcome measure for people with diabetes in primary care practices. (Bodenheimer, 2012)
- *Use of electronic health records* (EHRs) led to higher achievement of care & outcome standards for patients with diabetes than use of paper records, including meeting blood pressure and LDL-cholesterol goals. (Cebul, 2011)
- *Achieving NCQA patient-centered medical home recognition* led to significant improvement in the percentage of patients with diabetes who received evidence-based complications screening. (Gabbay, 2011)
- *Involvement of non-physician providers* such as pharmacists, case managers, and community health workers is strongly supported as a way to improve diabetes outcomes. (NIH, 2011)

#### **How successful is the health care system in addressing neuropathy in people with diabetes?**

About a third of people with diagnosed diabetes did not receive a foot exam in 2010. (CDC, 2010)

Hospital discharge rates for nontraumatic lower extremity amputations are higher among blacks than among whites. (CDC, 2009)

Only 37% of people over 35 with diabetes identify amputation as a serious problem caused by diabetes.

#### **Why change the healthcare system?**

“Every system is perfectly designed to achieve exactly the results it gets. If we want new results - and we do - we need a new system.”

—Donald Berwick, formerly Centers for Medicare & Medicaid Services & Institute for Healthcare Improvement

### Diabetes and Neuropathy

Diabetes is associated with reduced quality of life, especially for people with multiple and/or severe complications.

Over \$1.6 billion in hospital costs resulted from diabetes-related lower extremity amputations in 2006. (Jiang, 2009)

#### **Chronic Care Model Components** ([www.improvingchroniccare.org](http://www.improvingchroniccare.org))

- Health care organization
- Delivery system design
- Clinical information systems
- Self-management support
- Decision support
- Community resources and policies

The Chronic Care Model is an effective frame-work for practice redesign.



## How Can Providers Assure Quality Care Related to Major Complications for People with Diabetes?

- Assess A1C 2 to 4 times a year
- Assess and control blood pressure and blood lipids
- Consider self-monitoring for blood pressure, especially for those with poorly controlled hypertension.
- Assure receipt of annual dilated eye exams and foot exams, appropriate immunizations and other preventive services
- Assess weight; recommend physical activity, healthy diet and medical nutrition therapy as appropriate
- Review, adjust and/or administer medications
- Promote self-management training
- Assess smoking status and advise smokers to quit
- Provide psychosocial assessment; refer to a mental health specialist familiar with diabetes, as appropriate
- Assess urine albumin & albumin/creatinine ratio (ACR) and estimated glomerular filtration rate (eGFR) annually

### Comprehensive Guidelines for Diabetes Management

• **American Diabetes Association** •

Standards of medical care in diabetes-2013  
[*Diabetes Care*. 2013;36(Suppl 1):S11-S66]

• **American Association of Clinical Endocrinologists** •

AACE Medical guidelines for clinical practice for developing a diabetes mellitus comprehensive care plan  
[*Endocr Pract* 2011 Mar-Apr;17(Suppl 2):1-53]

• **American Academy of Neurology** •

Evidence-based guideline: treatment of painful diabetic neuropathy  
[<http://www.guidelines.gov/content.aspx?id=33038&search=diabetic+neuropathy>]

• **Task Force on Community Preventive Services** •

[www.thecommunityguide.org/diabetes](http://www.thecommunityguide.org/diabetes)

Download fact sheets & references from the NACDD Diabetes Council web pages at <http://www.chronicdisease.org>. Click on *Diabetes*, then *Resources/Tools*.

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