



NACDD Diabetes Council

'Changing Practice to Reduce Diabetes Complications' Fact Sheet Series References

- **Changing health systems:**

"Interventions based on the Chronic Care Model improved at least 1 process or outcome measure for people with diabetes in primary care practices."

Bodenheimer T, Wagner EH, and Grumbach K. Improving primary care for patients with chronic illness The chronic care model, part 2. *JAMA*. 2002; 288(15):1909-1914.

"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 RD, Love TE, Jain AK, Hebert CJ. Electronic health records and quality of diabetes care. *N Engl J Med*. 2011;365(9):825-833.

"Achieving NCQA patient-centered medical home recognition led to significant improvement in the percentage of patients with diabetes who had evidence-based complications screening."

Gabbay RA, Bailit MH, Mauger DT, WagnerEH, Siminerio L. Multipayer patient-centered medical home implementation guided by the chronic care model. *The Joint Commission Journal on Quality and Patient Safety*. 2011;37(6): 265-273.

"Involvement of non-physician providers such as pharmacists, case managers, and community health workers is strongly supported as a way to improve diabetes outcomes."

Advances and Emerging Opportunities in Diabetes Research: A STRATEGIC PLANNING REPORT OF THE DIABETES MELLITUS INTERAGENCY COORDINATING COMMITTEE (Section titled: *Clinical Research To Practice: Translational Research*); NIH Publication No. 11-7572; 2011.

<http://www2.niddk.nih.gov/AboutNIDDK/ReportsAndStrategicPlanning/DiabetesPlan/PlanPosting.htm>

- **Retinopathy:**

"Treating diabetic eye disease with laser therapy can reduce the development of severe vision loss by up to 60%."

Centers for Disease Control and Prevention. National diabetes fact sheet: national estimates and general information on diabetes and prediabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2011.

"People with diabetes who received guideline-recommended care had substantially reduced low vision/blindness."

Sloan FA, Grossman DS, Lee PP. Effects of receipt of guideline-recommended care on onset of diabetic retinopathy and its progression. *Ophthalmology*. 2009 Aug;116(8):1515-21, 1521.

“People with diabetes have medical expenses more than twice as high as people without diabetes.”
Centers for Disease Control and Prevention. National diabetes fact sheet: national estimates and general information on diabetes and prediabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2011.

“Diabetes-related blindness costs the U.S. about \$500 million a year.”
Collins AJ, Foley RN, Herzog C, et al. United States Renal Data System, 2010 Annual Data Report. Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the United States, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2010.

“Vision loss is also associated with depression and social isolation.”
Centers for Disease Control and Prevention. The State of Vision, Aging, and Public Health in America. Atlanta: U.S. Department of Health and Human Services; 2011.

“A third of U.S. adults with diabetes did not get a dilated eye exam in 2010.”
CDC Diabetes Data and Trends
<http://apps.nccd.cdc.gov/DDTSTRS/default.aspx>

“Blacks with diabetes were less likely to have a dilated eye exam than whites.”
National Healthcare Quality Report
U.S. Department of Health and Human Services/Agency for Healthcare Research and Quality
AHRQ Publication No. 12-0006 March 2012 www.ahrq.gov/qual/qrd11.htm

“Only 63% of people over 35 with diabetes identify blindness as a serious problem caused by diabetes.”
Social and Scientific Systems Inc. National diabetes education program survey of the public's knowledge, attitudes, and practices related to diabetes: 2008. Silver Spring, MD 2009.

- **CVH:**

“Reducing diastolic blood pressure from 90 mmHg to 80 mmHg in people with diabetes reduces the risk of major cardiovascular events by 50%.”

Centers for Disease Control and Prevention. National diabetes fact sheet: national estimates and general information on diabetes and prediabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2011.

“Implementing clinical reminders for diabetes care, enhancing patient education, and other program changes significantly improved the proportion of patients achieving A1c, blood pressure, and LDL-C goals in a Veterans Administration medical center.”

Vouri SM, Shaw RF, Waterbury NV, Egge JA, Alexander B. Prevalence of achievement of A1C, blood pressure, and cholesterol(ABC) goal in veterans with diabetes. *J of Managed Care Pharm.* 2011;17(4):304312.

“Heart disease is one of the top ten costliest health conditions.”

Soni, A. Top 10 most costly conditions among men and women, 2008: estimates for the U.S. civilian noninstitutionalized adult population age 18 and older. Statistical Brief #331. July 2011. Agency for Healthcare Research and Quality, Rockville, MD.

“Heart trouble, stroke, hypertension and diabetes are among the top conditions causing disability.”

Centers for Disease Control and Prevention. Prevalence and most common causes of disability among adults—United States, 2005. *MMWR*. 2009;58:421– 426.

“Diabetes, high blood pressure or a combination of these two diseases accounted for over 9% of health care costs in the U.S. (2003-2005).”

Trust for America’s Health. Issue Report. Prevention for a healthier America: investments in disease prevention yield significant savings, stronger communities. February 2009.

“Less than 14% of people with diabetes met all goals for blood pressure, A1C & LDL-cholesterol. “

Vouri SM, Shaw RF, Waterbury NV, Egge JA, Alexander B. Prevalence of achievement of A1C, blood pressure, and cholesterol (ABC) goal in veterans with diabetes. *J of Managed Care Pharm*. 2011;17(4):304- 312.

“About one fourth of people with diabetes have a blood pressure \geq 140/90.”

CDC Diabetes Data and Trends

<http://apps.nccd.cdc.gov/DDTSTRS/default.aspx>

“Only about half of people over 35 with diabetes identify cardiovascular disease as a serious problem caused by diabetes.”

Social and Scientific Systems Inc. National diabetes education program survey of the public's knowledge, attitudes, and practices related to diabetes: 2008. Silver Spring, MD 2009.

- **Kidney Disease:**

“Improving blood pressure and blood glucose control in people with diabetes reduces the risk for kidney disease by up to 40%.”

“Treatment with angiotensin-converting enzyme inhibitors (ACEIs) and angiotensin receptor blockers (ARBs) is more effective in reducing the decline in kidney function than treatment with other blood pressure lowering drugs.”

Centers for Disease Control and Prevention. National diabetes fact sheet: national estimates and general information on diabetes and prediabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2011.

“Diabetes and chronic kidney disease accounted for over 2% of health care expenditures, an estimate 4 times higher than the value expected based on disease prevalence. “

Foley RN and Collins AJ. The growing economic burden of diabetic kidney disease. *Curr Diab Rep*. 2009;9:460–465.

“Diabetes is associated with reduced quality of life, especially for people with multiple and/or severe complications such as ESRD.”

IOM. Living well with chronic illness: A call for public health action. 2012

“Thirty percent of end-stage renal disease (ESRD) patients received no pre-ESRD nephrology care.”

“In a national sample of primary care physicians, a substantial number didn’t correctly identify their patients with chronic kidney disease stages two to four.”

Israni RK, Shea JA, Joffe MM, and Feldman HI. Physician characteristics and knowledge of CKD management. *Am J Kidney Dis*. 2009;54: 238-247.

“Less than half of people over 35 with diabetes identify kidney disease as a serious problem caused by diabetes.”

Social and Scientific Systems Inc. National diabetes education program survey of the public's knowledge, attitudes, and practices related to diabetes: 2008. Silver Spring, MD 2009.

- **Neuropathy :**

“Blood pressure control reduces the risk of microvascular complications of diabetes, such as neuropathy, by about 33%.”

Centers for Disease Control and Prevention. National diabetes fact sheet: national estimates and general information on diabetes and prediabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2011.

“A multidisciplinary team approach that includes podiatrists most effectively prevented complications from diabetes and reduced the risk of amputation.”

Sloan, F. A., Feinglos, M. N. and Grossman, D. S. Receipt of Care and Reduction of Lower Extremity Amputations in a Nationally Representative Sample of U.S. Elderly. Health Services Research. 2010;45(6 Pt 1):1740-62.

“Over \$1.6 billion in hospital costs resulted from diabetes-related lower extremity amputations in 2006.”

Jiang HJ, Russo CA, and Barrett ML. Nationwide frequency and costs of potentially preventable hospitalizations, 2006. Statistical Brief #72. April 2009. Agency for Healthcare Research and Quality, Rockville, MD.

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

IOM. Living well with chronic illness: A call for public health action. 2012

“About a third of people with diagnosed diabetes did not receive a foot exam in 2010.”

CDC Diabetes Data and Trends

<http://apps.nccd.cdc.gov/DDTSTRS/default.aspx>

“Hospital discharge rates for nontraumatic lower extremity amputations are higher among blacks than among whites.”

CDC Diabetes Data and Trends

<http://apps.nccd.cdc.gov/DDTSTRS/default.aspx>

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

Social and Scientific Systems Inc. National diabetes education program survey of the public's knowledge, attitudes, and practices related to diabetes: 2008. Silver Spring, MD 2009.

- **General Fact Sheet References and State Data References:**

“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

<http://www.healthleadersmedia.com/page-1/QUA-256546/Berwick-Pushes-for-Quality##>

Centers for Disease Control and Prevention. National diabetes fact sheet: national estimates and general information on diabetes and prediabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2011.

Michigan Diabetes Reports (Diabetes Fact Page, Prediabetes Fact Page, Impact of Diabetes in Michigan): http://www.michigan.gov/mdch/0,1607,7-132-2940_2955_2980---,00.html

Diabetes Management and Care Among **New York** State Adults, Diabetes Prevention and Control Program, Bureau of Chronic Disease Evaluation and Research, New York State Department of Health, prepared in 2012
<http://www.health.ny.gov/statistics/diseases/conditions/diabetes/>

Diabetes in **North Carolina**, 2011- NC Diabetes Prevention & Control Program Fact Sheet
<http://www.ncdiabetes.org/>

Konen J and Page J. The state of diabetes in **North Carolina**. NC Medical Journal. 2012;72(5):373-378.
http://www.ncmedicaljournal.com/archives/?confronting_the_diabetes_epidemic

Washington BRFSS Data Tables:
<http://www.doh.wa.gov/DataandStatisticalReports/HealthBehaviors/BehavioralRiskFactorSurveillanceSystemBRFSS/BRFSSDataTables.aspx>

Health of **Washington** State Report
<http://www.doh.wa.gov/DataandStatisticalReports/HealthofWashingtonStateReport/MostRecentReport.aspx>

Wisconsin Department of Health Services, Division of Public Health, Diabetes Prevention and Control Program. Wisconsin Diabetes Surveillance Report, 2012 September 2012.
<http://www.dhs.wisconsin.gov/diabetes/survrrpt.htm>

- **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>

National Institutes of Health

Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of

High Blood Pressure (JNC 7 Express)
<http://www.nhlbi.nih.gov/guidelines/hypertension/jncintro.htm>

American Academy of Ophthalmology

Diabetic retinopathy
<http://www.guidelines.gov/content.aspx?id=13502>

National Kidney Foundation

KDOQI clinical practice guidelines for chronic kidney disease
Am J Kidney Dis. 2002;39(Supp 1):S1-S266

National Institutes of Health

Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7 Express)
<http://www.nhlbi.nih.gov/guidelines/hypertension/jncintro.htm>

American Heart Association

Greenland P, Alpert JS, Beller GA, Benjamin EJ, Budoff MJ, Fayad ZA, Foster E, Hlatky MA, Hodgson JMcB, Kushner FG, Lauer MS, Shaw LJ, Smith SC Jr, Taylor AJ, Weintraub WS, Wenger NK. 2010 ACCF/AHA guideline for assessment of cardiovascular risk in asymptomatic adults: executive summary: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. *Circulation*. 2010;122:2748–2764.

Task Force on Community Preventive Services

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*

Direct link to fact sheets: <http://www.chronicdisease.org/?page=DiabetesResourcesTool>