DIABETES QUALITY CARE MONITORING SYSTEM

QUALITY IMPROVEMENT *REPORT*

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MT DEPARTMENT OF PUBLIC HEALTH AND HUMAN SERVICES

This issue of the Diabetes QualityCare Monitoring System – Quality improvement Report (DQCMS-QIR) highlights information about foot carefor patients with diabetes, as well as tools to assist with comprehensive foot exams.

PAGE

1 Putting Feet First in 2006
2 Data Regarding Care at DQCMS Sites
3 Tools to Assist Comprehensive Foot Exams
4 Resourses

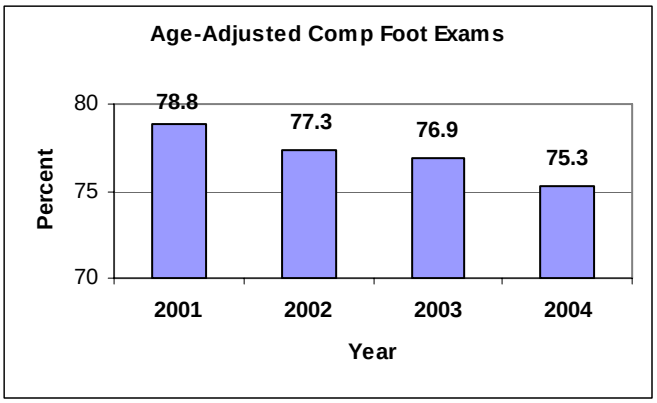
Putting Feet First in 2006

Foot problems for people with diabetes are common throughout the world and are a source of morbidity and mortality. The economic consequences are major, both to society and to patients and their families.

A recent report in the MMWR presented data from the National Health and Nutrition Examination concerning Lower extremity disease in the United States population.[1] With a careful examination, lower extremity disease, including peripheral arterial disease and/or peripheral neuropathy along with any disabling foot complication (ulcer, infection, gangrene or amputation) was found in one fifth of the US population aged 40 years and older. Among those with diabetes, the rates were twice as high as the rates in those without diabetes.

Many of the problems including peripheral neuropathy were asymptomatic as shown in the figure.

Congratulations to Montana clinicians for reaching the HP 2010 goal of 75% for comprehensive foot exams. Although the foot exam rate is above the HP 2010 goal, the rates for comprehensive foot exams have been decreasing since 2001.



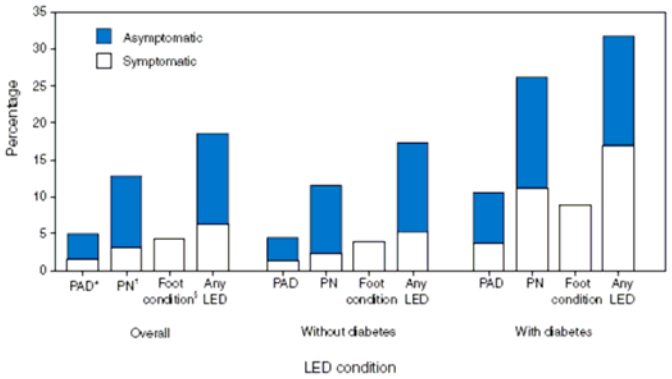
Diabetic foot disease was also featured in a global symposium in the Lancet in November, which included both reviews and editorials summarizing several points. As in NHANES, the symposium noted that foot disease in persons with diabetes is very common. The lifetime risk of developing a foot ulcer may be as high as 25%! Every 30 seconds a lower limb is lost somewhere in the world.

The most frequent causal pathway starts with neuropathy. Although many health care workers believe that the problems stem solely from impaired circulation. Ulceration follows trauma to the insensitive foot and the problem may go unrecognized because of the loss of protective sensation. Costs of foot disease are very high not only for the treatment and management but also for the long-term disability involved. Yet many health care systems have not aggressively adopted preventive approaches despite their well-documented effectiveness.

Finally, the authors an editorialists noted that a comprehensive foot exam is the **most important** step to identify the at risk foot and to prevent foot complications in diabetes.[2]

References:
1. MMWR, Nov 18, 2005/54(45); 1158-1160
2 Boulton et al, pages 1719-23

FIGURE. Prevalence of lower extremity disease (LED) among adults aged ≥40 years overall and with and without diabetes, by LED condition and symptom status — National Health and Nutrition Examination Survey, United States, 1999–2002



* Peripheral arterial disease. Symptomatic persons reported calf pain in either leg while walking.
† Peripheral insensate neuropathy. Symptomatic persons reported numbness/loss of feeling or painful sensations/tingling in feet during the preceding 3 months.
§ Foot ulcers, lesions, or foot/toe amputations.

FIGURE 1: PHYSICIAN OFFICES AND EDUCATION PROGRAMS PARTICIPATING IN THE DIABETES QUALITY CARE MONITORING SYSTEM (DQCMS) PROJECT, October 2005 (N = 29)

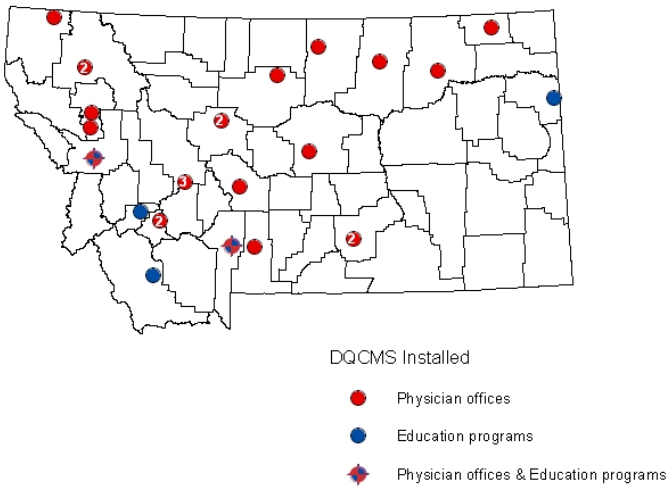
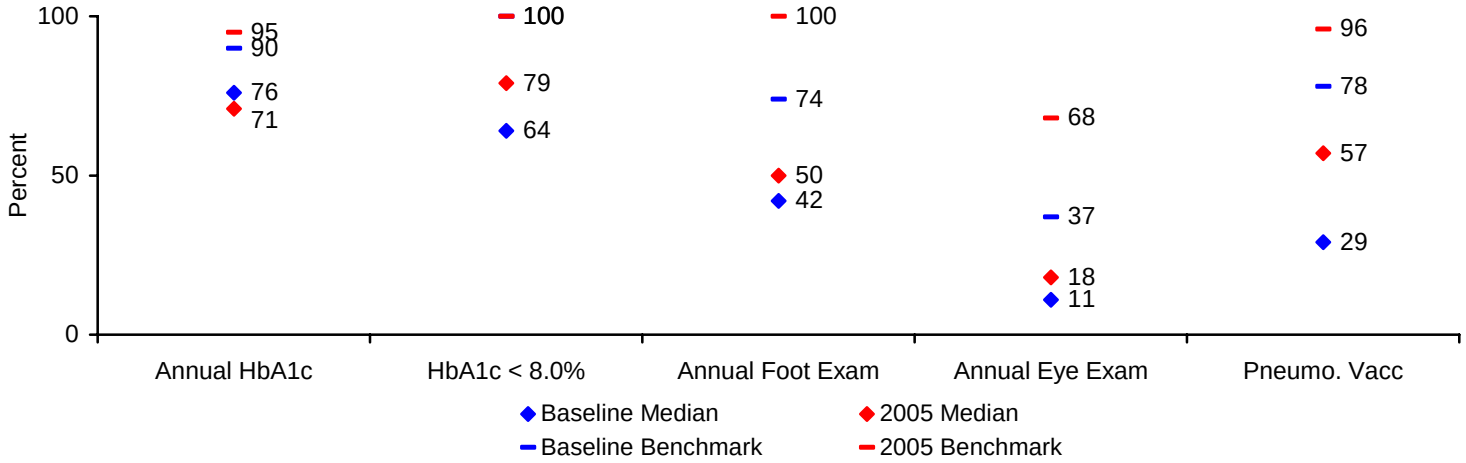
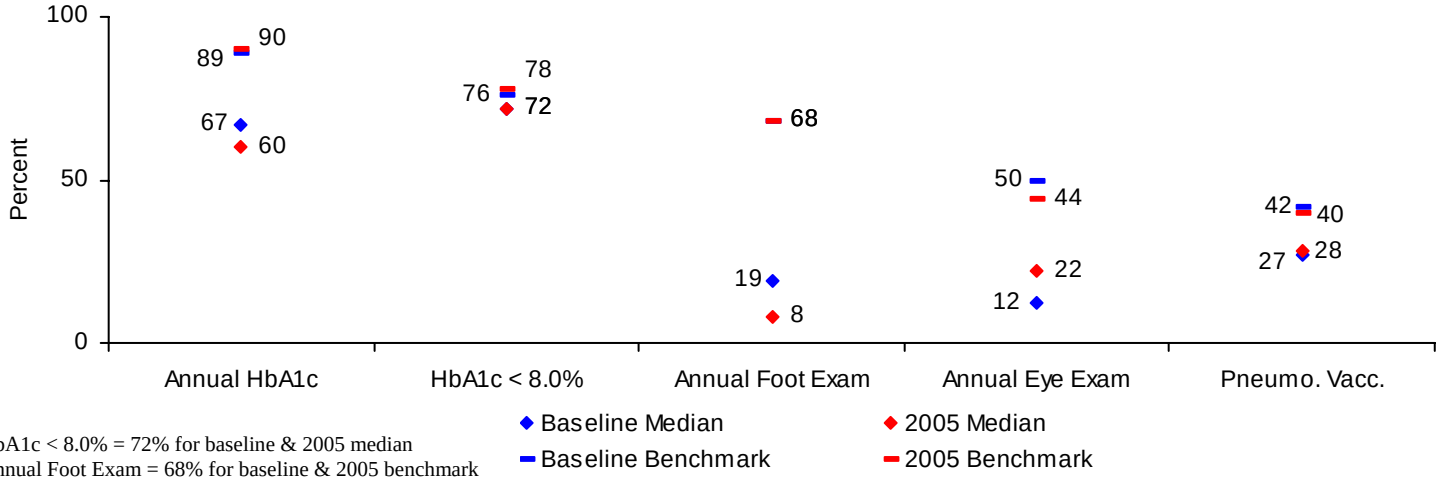


FIGURE 2: DIABETES CARE INDICATORS FROM MONTANA PHYSICIAN OFFICES PARTICIPATING IN THE DCMS/ DQCMS PROJECT, BASELINE (N = 22 CLINICS; 3,629 PATIENTS) AND OCTOBER 2005 (N = 23 CLINICS; 5,162)



HbA1c <8.0% = 100% for baseline and 2005 benchmark

FIGURE 3: DIABETES CARE INDICATORS FROM MONTANA DIABETES EDUCATION PROGRAMS PRATICIPATING IN THE DQCMS PROJECT, BASELINE (N = 4 SITES; 912 PATIENTS) AND OCTOBER 2005 (N = 5; 746 PATIENTS)



HbA1c < 8.0% = 72% for baseline & 2005 median
Annual Foot Exam = 68% for baseline & 2005 benchmark

TOOLS TO ASSIST COMPREHENSIVE FOOT EXAMS

In response to several requests, the following documentation form was developed. This “crack and peel” form makes it quick and easy to document all aspects of a comprehensive foot exam.

Foot Assessment				
History	☐ Peripheral neuropathy (pain, numbness) ☐ Peripheral vascular disease (claudication) ☐ Appropriate footwear			
Exams				
Appearance	Sensory (10 gram monofilament)	Pulses 0-3+	LT	R
☐ Active problem	right left	DP		
☐ callus or pre-ulcer		PT		
☐ ulcer		Footwear modifcat.		
☐ redness or swelling	☐ NA _____ (date last foot exam). In circled areas indicate sensation to monofilament (✓ = sensate; X = non-sensate) Draw in: • Callus ● Ulcer	☐ None		
☐ deformity		☐ Athletic shoes		
		☐ Inserts-depth shoes		
		☐ Therapeutic shoes		
Risk Category & Follow-up				
☐ Low Risk	☐ High Risk	Recommendations		
☐ Preventive ed.	☐ Loss prot. sensation	☐ Callus/nail trimming		
☐ Next risk assess.	☐ Deformity	☐ Intensive foot education		
date ➔	☐ Hx of ulcer or Amp.	☐ Ulcer Rx follow-up date ➔		
	☐ PVD	☐ Referral ➔		

The first section documents **historical information** or previous diagnoses.

The second portion of the documentation form consists of the **foot exam**. Upon observation, is there any active problem? If so, check the appropriate boxes. Then sensation is evaluated using the 5.07 monofilament tool. Clinicians can assess for the presence or absence of sensation to the monofilament at multiple sites across the bottom of the forefoot. Both dorsalis pedis (DP) and posterior tibial (PT) pulses can be documented on this form with 0=absent pulses and 3=bounding pulses.

Based on clinical exam and historical information, the form gives the opportunity to stratify the patient into a risk category. The form also provides several options for follow-up activities for individual patients.

This form was developed to assist busy clinicians to check off what applies to this patient and offer a quick and complete foot evaluation in order to promote and optimize foot care, according to ADA recommendations.

DQCMS MAKES IT EASY TO IDENTIFY HIGH-RISK PATIENTS

- Who have not had a comprehensive foot exam in a specific time frame
- who are at highest risk for foot ulcers and schedule appropriate follow-up or referral

High-Risk Criteria

- Lack of protective sensation (5.07 monofilament)
- Deformity
- Previous history of ulcer or amputation
- Peripheral vascular disease

Recognizing risk is a call to **ACTION**
--to prevent injury and ulcerations

If you are interested in any of these tools or would like more foot care intervention information, please contact:

Linda Stewart 406-245-6003 or

Liz Johnson 406-444-0593

THE BOOT

The Montana Diabetes Quality Improvement team developed “The Boot” to promote foot care in the clinical setting. Child-sized cowboy boots are filled with tools for comprehensive foot exams including monofilaments, documentation tools, stickers to flag charts for patients with high-risk feet, as well as lotion samples and patient education brochures. “The Boot” serves as a reminder for patients to have their feet examined by their health care professional.

Welcome to the new DQCMS/QI Partners:

- Powell County Medical Center, Deer Lodge
- Triangle Health Care, Chester

SAVE THE DATE

WHAT: Cardiovascular Health Summit
WHEN: April 7th, 2006
WHERE: Grouse Mountain Lodge, Whitefish, MT
(Call Ann Bay @ 444-5508 for more information)

Are you doing all that you can to assist your patients to quit smoking?
Do you know how to advise your patient on the correct use of NRT?

The Montana Tobacco Use Prevention Program in collaboration with the Montana Diabetes Program is offering a free CME presentation entitled:
"Successful Strategies for Treating Tobacco Dependence" by Greg Holzman, MD, MPH

This presentation will review the impact of tobacco use in Montana while outlining effective practices for helping tobacco users quit – including effective use of nicotine replacement therapy and use of the Montana Tobacco Quitline 1-866-486 QUIT (7848).

If you would like to have this free CME presentation scheduled to come to your clinic, please contact Bonnie Barnard at 444-7362

Summary of Revisions/Additions to Standards of Medical Care for Diabetes (2006)

Revisions:

Assessment of glycemic control
Use of point-of-care testing for HbA1c (A1c) allows for timely decisions on therapy changes.

Glycemic goals
A1c goal ***for patient in general*** is <7%.
A1c goal ***for individual patients*** is as close to normal (<6%) as possible without significant hypoglycemia

Nephropathy
Protein intake should be limited to the RDA (0.8 g/kg) in patients with any degree of kidney disease.
Serum creatinine measured at least annually for estimation of GFR for all adults with diabetes regardless of degree of urine albumin excretion.

Additions
Medical Nutrition Therapy extensively enhanced
Diabetes self-management education (DSME)
Physical activity
Neuropathy

Reference:
1. ADA Clinical Practice Recommendations 2006