

DIABETES MELLITUS CARE IN THE MILITARY HEALTH SYSTEM (MHS)

A National Quality Management Program Special Study

“Seventy-two percent of the population was tested for HbA1c. Sixty-three percent of the population’s HbA1c tests were in control (less than 9.5 percent).”

Why manage Diabetes?

In the United States, an estimated 16 million people have diabetes. Approximately 200,000 deaths a year are attributed to diabetes (Vincor, 2001). Sequelae of diabetes can include blindness, renal failure, coronary heart disease, and microcirculatory problems (Andreoli, et al., 1997).

In 1999, the Department of Defense (DoD), in collaboration with Veterans Health Administration (VHA), developed Clinical Practice Guidelines (CPG) for diabetes mellitus (The Management of Diabetes Mellitus Working Group, 1999). The CPG, containing guidelines similar to those recommended by the Diabetes Quality Improvement Program (DQIP), encompassed patient management such as glycemic control, evaluation of the eyes and feet, and early recognition and treatment of co-morbid conditions including hypertension, hyperlipidemia, and renal disease.

In June 2001, the guidelines were adopted by DoD. In that same year, the National Quality Management Program (NQMP) Scientific Advisory Panel (SAP) commissioned a study of diabetes in the MHS. The study adapted, where possible, the methodologies used by the National Committee for Quality Assurance (NCQA) Health Plan Employer Data and Information Set (HEDIS). Compliance levels for five of the ten DoD/VHA CPG metrics were measured and compared with the HEDIS percentiles for commercial health plans.

Across all Military Treatment Facilities (MTFs), study results indicate compliance to the diabetes CPG metrics was very similar to levels of compliance noted for DQIP measures both in content areas and recommended target values. Specifically, the MHS exceeded the HEDIS 90th percentile on all measures except LDL-C compliance.

The 2002 study reexamines 2001 measures and adds compliance with recommended microalbumin testing. The 2002 study also includes the additional criteria of continuous enrollment to an MTF and the inclusion of beneficiaries who had a prescription for insulin, oral hypoglycemic or antihyperglycemics.

What was the methodology?

The study was conducted using HEDIS 2002 Technical Specifications for the Comprehensive Diabetes Care measure. The specifications were implemented as written and no modifications were made. The measure consists of six separate rates for a defined population of people with diabetes. These rates can be used to estimate compliance with CPG recommendations for diabetes care. Electronic medical record data from January 1, 2001 through December 31, 2001 were used to calculate the rates.

MTF continuously enrolled beneficiaries, age 18 to 75, with a primary diagnosis of diabetes were identified as having one or more of the following:

- Received an insulin and/or oral hypoglycemics/antihyperglycemic prescription in 2000 or 2001
- Two outpatient visits with a primary diagnosis of diabetes identified in 2001
- One inpatient hospital or emergency room visit in 2001

What were the results?

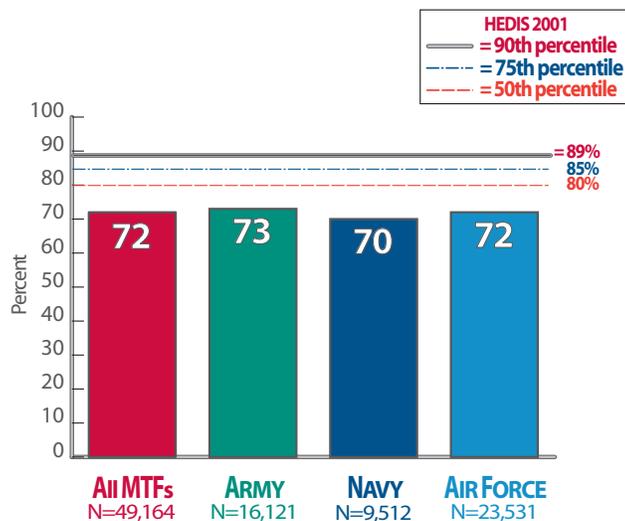
During the study period, 49,164 diabetics continuously enrolled to an MTF were identified from direct care and purchased care visits and prescription records using HEDIS methodology. Slightly more females (55 percent) than males (45 percent) were present in the cohort. Four in five cohort members were 45 years of

age and older. The cohort was predominantly Non-Active Duty (96 percent). The largest proportion was enrolled to Air Force MTF sites (48 percent), followed by Army MTF sites (33 percent), and Navy MTF sites (19 percent). Approximately one-third of the cohort was enrolled to an MTF in either Southeast Region 3 (14 percent) or Southwest Region 6 (19 percent). Regions 13 (Europe), 14 (Far East), 15 (Caribbean/Canada), and Alaska each contained small percentages (e.g., 1 percent or less) of the diabetics who met inclusion criteria.

Measure 1 – Hemoglobin A1c (HbA1c) Testing

This measure is the percentage of beneficiaries with diabetes whose HbA1c level was tested. Seventy-two percent of the population was tested for HbA1c. This rate was less than the HEDIS 2001 50th percentile rate of 80 percent for HbA1c (Figure 1).

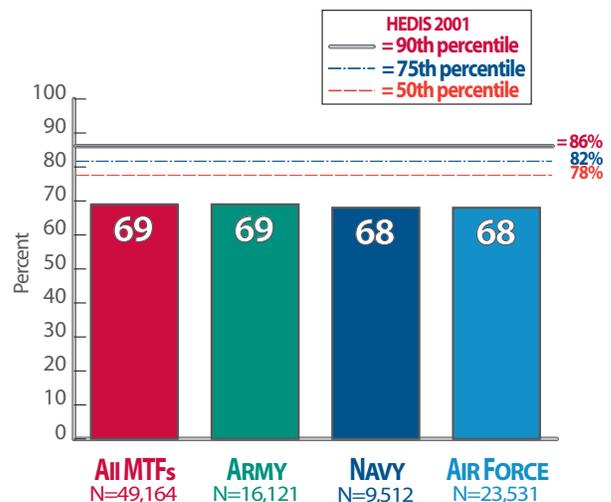
Figure 1: HbA1c Testing Rates For Enrolled Beneficiaries With Diabetes



Measure 2 – Low Density Lipoprotein-Cholesterol (LDL-C) Testing

This measure is the percentage of beneficiaries with diabetes whose LDL-C level was tested. Sixty-nine percent of the population was tested for LDL-C. This rate was less than the HEDIS 2001 50th percentile rate of 78 percent for LDL-C (Figure 2).

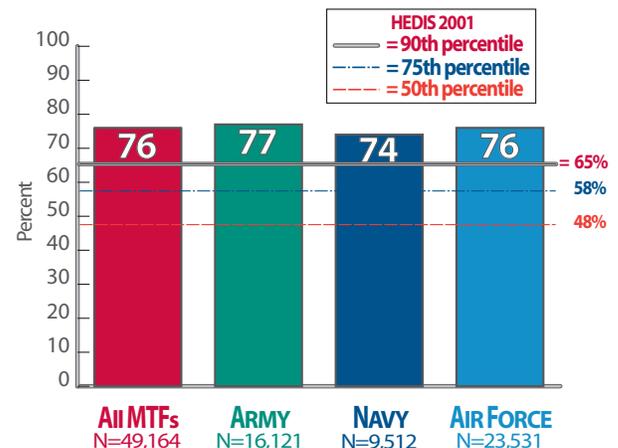
Figure 2: LDL-C Testing Rates For Enrolled Beneficiaries With Diabetes



Measure 3 – Eye Examinations

This measure is the percentage of beneficiaries with diabetes who received at least one eye examination. (See HEDIS 2001 Technical Specifications for inclusion criteria.) Seventy-six percent of the population received an eye examination. This rate exceeded the HEDIS 2001 90th percentile rate of 65 percent for eye examinations (Figure 3).

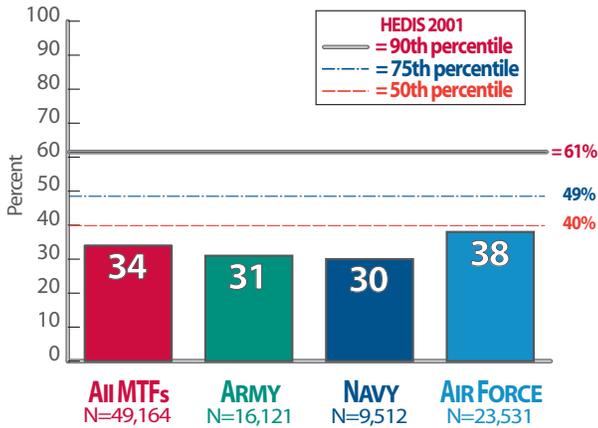
Figure 3: Eye Examination Rates For Enrolled Beneficiaries With Diabetes



Measure 4 – Microalbumin Testing

This measure is the percentage of beneficiaries with diabetes who were tested for microalbumin. Thirty-four percent of the population was tested for microalbumin. This rate was below the HEDIS 2001 50th percentile rate of 40 percent for microalbumin testing (Figure 4).

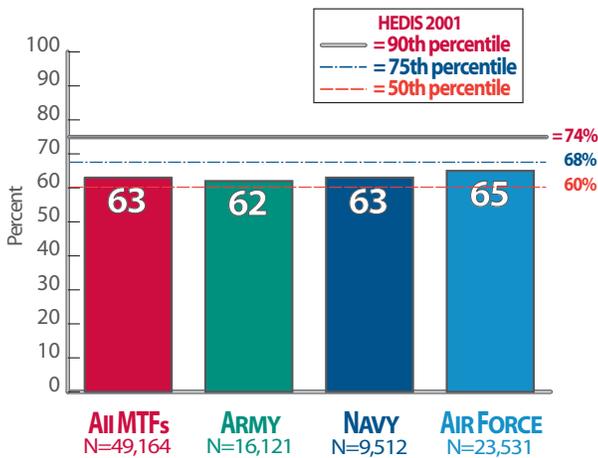
Figure 4: Microalbumin Testing Rates For Enrolled Beneficiaries With Diabetes



Measure 5 –HbA1c Control

This measure is the percentage of beneficiaries with diabetes whose HbA1c level was in control (less than 9.5 percent). Sixty-three percent of the population had HbA1c tests that were in control. This All MTF rate exceeded the HEDIS 2001 50th percentile rate of 60 percent (Figure 5).

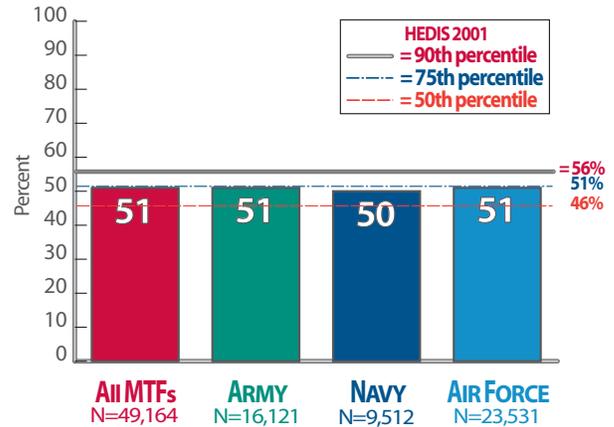
Figure 5: HbA1c Control Rates For Enrolled Beneficiaries With Diabetes



Measure 6 – LDL-C Control

This measure is the percentage of beneficiaries with diabetes whose LDL-C level was in control (less than 130mg/dl). Fifty-one percent of the population had LDL-C tests that were in control. This rate was below the HEDIS 90th percentile rate of 56 percent for control of LDL-C. However, this rate exceeded the HEDIS 2001 50th percentile rate of 46 percent (Figure 6).

Figure 6: LDL-C Control Rates For Enrolled Beneficiaries With Diabetes



Conclusions and Recommendations

In general, levels of compliance to recommendations of the six CPG metrics explored were less than anticipated, especially since the study population was continuously enrolled to an MTF and therefore had the opportunity for continuity of care management. Since this study provided documentation of baseline characteristics, further examinations of practice patterns and consideration of methods and processes for assuring documentation of care are warranted. Suggestions for further study include:

- Analyze gender and age differences in testing and control.
- Compare MTF and Network Care enrollee populations to understand total care for the DoD population with diabetes.

Study Limitations

- This study was conducted in accordance with the HEDIS 2002 Technical Specifications. Therefore, results of this study are not comparable to other studies using a modified HEDIS methodology.
- The NQMP 2001 study was conducted using modified HEDIS Technical Specifications. Therefore, results between the 2001 and 2002 studies are not comparable.

References

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