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# MEDICARE

# Provision of Key Preventive Diabetes Services Falls Short of Recommended Levels

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# Medicare: Provision of Key Preventive Diabetes Services Falls Short of Recommended Levels

Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to discuss our recent report on preventive and monitoring services provided to Medicare beneficiaries with diabetes.[1] Diabetes is a prevalent, costly, chronic disease that has substantial effects on the Medicare program: at least 1 in 10 beneficiaries is diagnosed with diabetes, and on average these beneficiaries cost Medicare considerably more than those without diabetes. Most experts agree that preventive care—including both appropriate medical management and patient self-management—can improve the quality of life for people with diabetes, and it may help control costs. Prevention for diabetes aims to slow the disease's progression through screening, monitoring, and treating conditions to keep them from worsening and becoming more costly.

The Medicare Preventive Benefit Improvement Act of 1997 (H.R. 15, introduced Jan. 7, 1997) proposes new Medicare coverage for a number of preventive services, including diabetes outpatient self-management training, and for blood-testing strips that people with diabetes use to monitor their blood glucose control. While we did not specifically assess these proposals, our findings on the use of diabetes preventive and monitoring services should contribute to deliberations on this legislation.

At your request, we examined how well the health care system provides preventive services to Medicare beneficiaries with diabetes. We focused our review on the following questions: (1) To what extent are Medicare beneficiaries with diabetes receiving recommended levels of preventive and monitoring services? (2) What are Medicare health maintenance organizations (HMO) doing to improve delivery of recommended diabetes services? (3) What activities does the Health Care Financing Administration (HCFA) support to address these service needs for Medicare beneficiaries with diabetes? To respond to these questions, we identified a representative sample of more than 168,000 people with diabetes in the Medicare fee-for-service program and reviewed their service claims records for 1994. We also surveyed 88 HMO plans serving Medicare beneficiaries on their approaches to preventive diabetes care and conducted follow-up interviews with 12 of those plans.

In brief, we found that while experts agree that regular use of preventive and monitoring services can help minimize the complications of diabetes, most Medicare beneficiaries with diabetes do not receive these services at

[1]Medicare: Most Beneficiaries With Diabetes Do Not Receive Recommended Monitoring Services (GAO/HEHS-97-48, Mar. 28, 1997).

recommended intervals. This is true both in traditional fee-for-service Medicare, which serves about 90 percent of all beneficiaries, and in managed care delivery. The efforts of Medicare HMOs to improve diabetes care have been varied but generally limited, with most plans reporting that they have focused on educating their enrollees with diabetes about self-management and their physicians about the need for preventive and monitoring services. Very few plans have developed comprehensive diabetes management programs. At the federal level, HCFA has targeted diabetes for special emphasis and has begun to test preventive care initiatives; but like the HMOs, HCFA's efforts are quite recent and the agency does not yet have results that would allow it to evaluate effectiveness.

## Medicare Beneficiaries With Diabetes Are Not Receiving Recommended Levels of Monitoring Services

The American Diabetes Association's (ADA) clinical care recommendations, which reflect the published research evidence and expert opinion, are widely accepted as guidance on what constitutes quality diabetes care. We selected for review six of ADA's recommended monitoring services that can be measured using Medicare claims data (see table 1). The service frequencies recommended in table 1 generally apply to the average person with noninsulin-dependent diabetes, the type that accounts for more than 90 percent of diabetics in Medicare. Of course, some individuals may need more or fewer services depending on their age, medical condition, whether they use insulin, or how well their blood sugar is controlled.

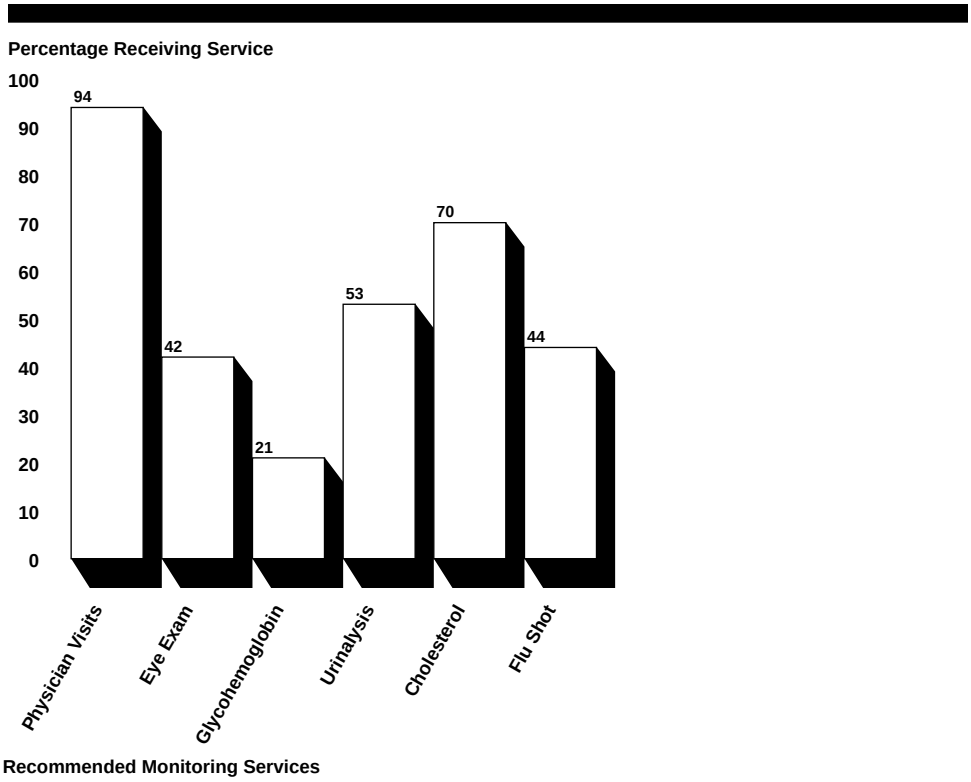
**Table 1: Diabetes Monitoring Services Included in Our Analysis**

| Service | Frequency per year | Purpose |
|---|---|---|
| Physician visits | 2 - 4 | Monitor general health and diabetes control; order and review lab tests; conduct foot exams; and refer to other services |
| Eye exam (dilated) | 1 | Identify early signs of diabetic retinopathy and refer for treatment |
| Glycohemoglobin test | 2 | Assess and monitor achievement of glycemic control goals |
| Urinalysis test | 1 | Monitor kidney function by testing for albumin or protein |
| Serum cholesterol test | 1 | Monitor cholesterol as contributor to heart disease and circulatory problems |
| Flu shot (in season) | 1 | General preventive service for high-risk populations, such as older people and people with diabetes |

Source: ADA, "Clinical Practice Recommendations, Standards of Medical Care for Patients with Diabetes Mellitus," Diabetes Care, vol. 19, suppl. 1 (1996). The annual flu shot is recommended by the American College of Physicians and supported by the Centers for Disease Control and Prevention (CDC).

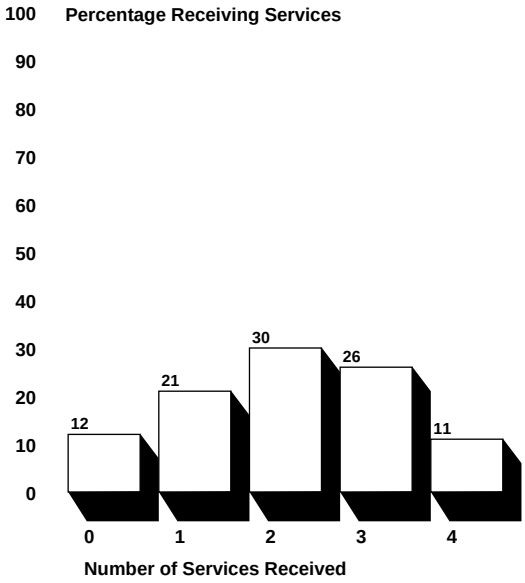
As figure 1 shows, our cohort of about 168,000 Medicare beneficiaries with diabetes in fee-for-service delivery fell far short of the recommended frequencies of most monitoring services in 1994. Although 94 percent of the beneficiaries received at least two physician visits, less than half (42 percent) received an eye exam, only 21 percent received the recommended two glycohemoglobin tests, and 53 percent had a urinalysis. The fact that 70 percent received a serum cholesterol test may reflect both the successful public education campaign in the late 1980s and the frequent inclusion of cholesterol in automated blood tests. We believe the flu shot (44 percent) is underreported in Medicare claims data, because many people receive flu shots in nonmedical settings.

**Figure 1: Fee-for-Service Utilization Rates for Recommended Monitoring Services, 1994**




Utilization rates are even lower when the monitoring services are considered as a unit. (See fig. 2.) About 12 percent of our diabetes cohort did not receive any of four key monitoring services: at least one each of the eye exam, glycohemoglobin test, urinalysis, and serum cholesterol test. About 11 percent showed Medicare claims for all four of these services.

**Figure 2: Percentage in Fee-for-Service Receiving Key Monitoring Services, 1994**




Note: The four key services are at least one eye exam per year, one glycohemoglobin test, one urinalysis, and one serum cholesterol test.

We analyzed utilization rates by patient characteristics and found that rates were generally similar for men and women and for all age groups over age 65. However, only 28 percent of beneficiaries under age 65 (who were eligible for Medicare because of disability) received an eye exam, compared with 43 percent of those aged 65 to 74 and 44 percent of those 75 and older. We also found that white beneficiaries with diabetes received the six monitoring services at consistently higher rates than beneficiaries who were black or of another racial group, but the differences were not great.

We were unable to conduct a similar analysis of the six monitoring services' use rates among beneficiaries with diabetes who were enrolled in Medicare HMOs because HCFA does not require its HMO contractors to report patient-specific utilization data. According to the limited data we obtained from published research and other sources, however, it appears that use rates are also below recommended levels in Medicare HMOs.

## Patient and Physician Factors Contribute to Less-Than-Recommended Utilization

Although it is unclear what specifically accounts for the less-than-recommended use of monitoring services found in our study, a number of factors—including patient and physician attitudes and practices—may contribute to the situation. Some experts expressed concern that both patients and physicians need to take diabetes more seriously and make the effort to manage it more aggressively.

Patients with a chronic condition such as diabetes bear much of the responsibility for successful disease management; but for many patients, self-management does not become a priority until serious complications develop. Then, difficult lifestyle changes may be required, such as weight loss, smoking cessation, and increased exercise. Patients may lack the knowledge, motivation, and adequate support systems to make these changes in addition to undertaking the active self-monitoring and preventive service regimens that are necessary to control diabetes.

The substantial out-of-pocket costs of active self-management also may discourage Medicare beneficiaries with diabetes. Diabetes-related supplies that are used at home, such as insulin, syringes, and blood glucose-testing strips, are not fully covered by Medicare. For example, insulin costs about $40 to $70 for a 90-day supply, syringes cost $10 to $15 per 100, and glucose-testing strips cost 50 to 72 cents each (or about $1,000 a year for a diabetic who tests four times a day).

Another factor in the underutilization of recommended preventive and monitoring services may be physicians and other health care providers who are not familiar with the latest diabetes guidelines and research supporting the efficacy of treatment. Moreover, many Medicare beneficiaries with diabetes have several serious medical conditions, and in the limited time of a patient visit, a physician is likely to focus on the patient's most urgent concerns, perhaps neglecting ongoing diabetes management and patient education. Finally, managed care plans and physician practices alike tend to lack service-tracking systems capable of reminding physicians and patients when routine preventive and monitoring services are needed.

## HMO Efforts to Manage Diabetes Care Are Varied but Limited

We surveyed 88 Medicare HMO contractors about their efforts to manage diabetes care, with particular attention to how they encouraged the use of preventive and monitoring services. We expected that the HMOs might have identified diabetes as a problem area and might have taken steps to implement management approaches. These HMOs did in fact report a wide

range of diabetes management efforts, and a few were developing comprehensive programs; but most plans' efforts were limited primarily to educational approaches. Most efforts were initiated recently, and little is known yet about their effectiveness.

Every HMO in our survey reported using at least one approach to educate enrollees with diabetes about appropriate diabetes management. The most common approach—used by 82 of the 88 plans—was featuring articles about diabetes in publications for all enrollees. In addition, some plans provided comprehensive manuals to their diabetic enrollees. Sixty-eight HMOs reported having diabetes-related health professionals, such as nurses, certified diabetes educators, and nutritionists available to educate enrollees. A number of plans offered classes for several levels of diabetes education ranging from basic to advanced. Ten plans contracted with disease management companies to provide diabetes education services, and a few reported telephone advice services.

Most of the HMOs reported they also had undertaken educational efforts directed to their physicians, stressing the importance of preventive care through such means as written materials and meetings. Nearly three-fourths of the HMOs reported using clinical practice guidelines for diabetes care. In one HMO, endocrinologists meet regularly with small groups of primary care physicians to provide training on important diabetes topics, such as diabetic eye disease and foot care. This plan also has developed a physician training video on diabetic foot care.

## Many Plans Are Augmenting Education With Other Approaches

Although information and education may produce short-term behavioral changes, they may not be enough to sustain the long-term behavioral and lifestyle changes necessary to achieve good diabetes control. Recognizing this, many of the HMOs in our survey reported using additional approaches to continuously encourage appropriate diabetes management. For example, about half of the HMOs reported one or more types of reminders for enrollees and physicians, such as wallet-sized scorecards for enrollees to chart receipt of recommended services and posters in examining rooms reminding patients to take off their shoes and socks to prompt physicians to check their feet. As another example, 52 of the 62 plans that used clinical practice guidelines for diabetes reported having a system to monitor physicians' compliance with the guidelines and, in some cases, to provide feedback to the physicians.

In our follow-up interviews with 12 HMOs that reported using a variety of diabetes services, 5 told us they have committed substantial resources to develop systemwide, comprehensive diabetes management programs. For example, one HMO has based its approach to diabetes management around the long-term goals of improving patient health status and satisfaction as well as on plan performance on cost and utilization. Through a variety of interventions, such as diabetes care clinics, patient self-management notebooks, and diabetes education by telephone, this HMO tries to improve patient outcome measures ranging from improved blood glucose control and prevention of microvascular disease to the patient's assessment of improved quality of life and sense of well-being. Interventions designed to help physicians provide better diabetes care include an online diabetes registry updated monthly, use of evidence-based clinical practice guidelines, outcomes reports for physicians, and training by diabetes expert teams.

## Little Evidence Available on Effectiveness of Diabetes Management Efforts

Even the HMOs reporting the most comprehensive programs, however, generally had little information about the extent to which their diabetes management approaches had affected the use of recommended preventive and monitoring services. At best, they tended to collect utilization data on five or fewer services, and they began collecting these data only in 1993 or 1994. The service monitored most frequently, by 58 of the plans, was the diabetic eye exam. This was probably due to the eye exam's inclusion in HEDIS (the Health Plan Employer Data and Information Set), the performance-reporting system for commercial HMOs.

Although little information exists on the relative effectiveness of specific diabetes management approaches, experts generally believe that intensive and sustained interventions, such as in-person counseling and education rather than telephone calls or mailings, are most likely to support long-term behavior change. Because intensive interventions probably are more expensive than other approaches, it is important to measure their effectiveness before committing resources to them.

# HCFA Has Targeted Diabetes for Special Initiatives, but Effectiveness Is Still Largely Unknown

HCFA has identified diabetes as a major health problem in the Medicare population and has targeted the disease for special initiatives to improve physician and patient awareness, service delivery, and, ultimately, patient health outcomes. Among these initiatives is the National Diabetes Education Program, in which HCFA is participating with CDC and the National Institute of Diabetes and Digestive and Kidney Diseases. This program is being designed to increase general public awareness of

diabetes as well as patient and provider education about diabetes and practice guidelines.

HCFA works with local peer review organizations (PRO), each of which currently is required to implement at least one diabetes-related quality improvement project involving the providers in its state or states. A total of 33 diabetes-related projects were under way in late 1996. Finally, HCFA is sponsoring a multistate evaluation of diabetes intervention strategies, the Ambulatory Care Diabetes Project, which involves fee-for-service and HMO providers and PROs in eight states. The project has completed its baseline data collection and intervention stages, and began remeasurement for outcomes analysis in January 1997.

HCFA also wants to encourage development of better data collection systems for improved service utilization tracking. The agency anticipates requiring its Medicare HMO contractors to report the new HEDIS 3.0 performance measures, which include the diabetic eye exam and flu shot rates, and may add a measure of the glycohemoglobin test in the future. Moreover, HCFA is supporting research on other process- and outcomes-based performance measurement systems and is considering testing the feasibility of performance measurements in fee-for-service Medicare.

Like the diabetes management approaches we learned about in our survey of Medicare HMOs, HCFA's initiatives either have been undertaken recently or are still in the planning stages, and it is too soon to tell which of these projects will prove most effective. At the same time, some diabetes specialists have suggested that HCFA should be doing more, such as studying the effects of easing current coverage limitations on diabetes self-management training and supplies like blood-testing strips.

## Conclusions

Diabetes care is a microcosm of the challenges facing the nation's health care system in managing chronic illnesses among the elderly. The prevalence and high cost of diabetes make it an opportune target for better management efforts. When beneficiaries receive less than the recommended levels of preventive and monitoring services, the result may be increased medical complications and Medicare costs. Conversely, following the recommendations may enhance beneficiaries' quality of life.

Effectively managing diabetes is difficult to accomplish, however, and requires long-term, concerted efforts by people with diabetes and their

physicians. Among HMOs, where coordinated care and prevention are expected to receive special emphasis, many plans are exploring ways to improve diabetes management; but providers may be reluctant to invest in expensive approaches until their cost-effectiveness is more evident. HCFA, also recognizing the importance of this issue, has initiated a promising strategy of testing a variety of approaches to learn what works best in Medicare—that is, what is effective and what can be implemented at reasonable cost.

Mr. Chairman, this concludes my statement. I would be happy to answer any questions from you and other members of the Subcommittee. Thank you.

## Contributors

This testimony was prepared under the direction of Bernice Steinhardt, Director, Health Services Quality and Public Health Issues, who may be reached at (202) 512-7119 if there are any questions. Other key contributors include Rosamond Katz, Assistant Director, and Ellen M. Smith, Jennifer Grover, Evan Stoll, and Stan Stenersen, Evaluators.

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