



# HSR&D

## Health Services Research & Development Service

### MANAGEMENT BRIEF

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#### Diabetes Health Services Research: Providing the Energy for Change

"VA puts veterans first, and in so doing recognizes the substantial impact Diabetes has on each veteran and his or her quality of life. Diabetes health services research reflects VA's commitment to help the more than 500,000 diabetic veterans enjoy the highest possible quality of life and treatment for this debilitating chronic disease."

*John Feussner, M.D., Chief Research and Development Officer, VHA.*

#### What is Diabetes Health Services Research?

Diabetes is the third most common diagnosis in VA patients affecting 30% of the veteran population. Kidney failure, blindness, blood pressure problems, foot ulcers, and other painful conditions often complicate the diabetic veterans' quality of life. Over half the VHA's lower extremity amputations are performed on diabetic patients. Some of the diabetic veteran's burden decreases when health care practices and programs address all aspects of a diabetic veteran's health and lifestyle. Diabetes health services research examines all aspects of diabetes care. Health services researchers investigate the organization, management, and economics of diabetes care examining the health care delivery, quality, cost, and treatment outcomes.

#### Why is Diabetes health services research important to managers?

Diabetes is an expensive, chronic problem, even in the most motivated diabetic veterans. For diabetic veterans compromised by other lifestyle behaviors like alcohol, tobacco, or lack of motivation, complications can quickly overwhelm the patient and the health care system's ability to follow, manage, and truly help these veterans. Health services researchers help design and test diabetic health care interventions and programs, as well as identify interventions and programs that may need

changing. Managers, armed with these research findings can make informed decisions in targeting and planning diabetic health care programs. For example, diabetic foot ulcers are crippling, often leading to the more costly and disabling amputations noted above. One Seattle HSR&D/Rehabilitation Research & Development Service (RR&D) researcher has proposed a RR&D study to explore the preventive value of therapeutic footwear for diabetic veterans at high risk of amputation. Another study, the ongoing Veteran's Health Study (VHS), has scientifically demonstrated the link between diabetes severity and quality of life which while generally apparent to eyewitnesses, has been difficult to demonstrate. Bedford and Boston HSR&D researchers identified two quantitative measures: **increased blood sugar levels** indicate illness severity in the short term; and **diabetic complications**, numbers, types and severity, indicate reduced quality of life in the long term. These measures can now reliably paint the big picture for evaluating the severity of diabetes effects in different patient groups over time, and for evaluating how best to deliver diabetes care. Thus, as health services research broadens our view of diabetes care, strategies emerge for savings in suffering and possibly savings in health care dollars. The reports below reveal the potential of health services research for significantly changing the way Diabetic veterans receive care and treatment.

## CURRENT DIABETES RESEARCH FINDINGS

### Diabetic veterans improve blood sugar control and patient satisfaction with a primary care practice model.

This Durham HSR&D study found enhanced access and coordination of care with a primary care practice model, a case manager and consistent follow up care, results in better blood sugar control, fewer complications, and higher patient satisfaction.

Weinberger M, Kirkman MS, Samsa GP, et al: *A nurse coordinated intervention for primary care patients with non-insulin-dependent diabetes mellitus - impact on glycemic control and health-related quality of life.* *J Gen Intern Med*, 10: 59-66, 1995, Feb.

### Providers reach out and touch their diabetic patients.

In this **feasibility study**, weekly automated phone calls from a patient's health care practitioner, provided diabetic veterans in a primary care setting with a unique degree of access and support for their diabetes care. This automated voice messaging system gathered blood sugar level information and helped clinicians identify problems before they worsened. This study suggests that regular calls, as part of diabetes care, could ease suffering and costs associated with diabetic complications, as well as increasing the diabetic patient's awareness of his health status.

Mah CA, Piette JD, et al. *The feasibility of automated voice messaging as an adjunct to diabetes outpatient care. Paper presented at the Annual Meeting of the Health Services Research and Development Service.* March 1996.

### Intense treatment prevents blindness and kidney failure in diabetics at risk.

A decision system identifying at-risk diabetics resulted from this Ann Arbor HSR&D statistical modelling study. This system guides practitioners in estimating expected benefits from intensified blood glucose control in diabetic patients with early onset diabetes (before age 50) versus late onset diabetes (after age 65). The early onset patients are at higher risk for blindness or kidney problems. Targeting them for intensified insulin therapy can potentially prevent or substantially delay the onset of blindness or end stage kidney disease. This information can be used for patient counseling and for planning more cost-effective ambulatory care programs.

Vijan S, Hofer TP, Hayward RA: *The benefits of glyce-mic control in type II diabetes. Submitted for publica-tion April 1996.*

### What about the other foot?

This ongoing, Seattle HSR&D outcomes study is looking at the results of patients receiving treatment for newly diagnosed foot ulcers at five study sites. **Out-comes studies** look at results of care: recovery rates, complications, days of work lost, functional disability, infection rates, mortality and morbidity. One part of this study found foot ulcer patients did not always get an exam of their opposite foot or instructions on how to avert problems on the opposite foot. Many of these foot ulcers are caused by poor footwear. The study found that approximately 75% of patients went home wearing the very same shoes that may have initiated the foot ulcer. These findings reinforce the need and opportunity to develop a system for examination and treatment of diabetic patients at high risk for foot ulcers and amputa-tions.

Celnik C, Carter J, Fotieo G, and Reiber G. *Paper presented at the Annual Meeting of the Health Services Research and Development Service.* March 1996.

**PLEASE SEND COMMENTS** to Gerry McGlynn, MDRC 152-M, 150 S Huntington Ave, Boston, MA, 02130. Or, by phone at FTS 700-839-4433 or 617-278-4433.

This is our 4th MANAGEMENT BRIEF, please let us know: Topics for future Briefs:

General Comments:

We are considering a spinoff product. The PRACTICE BRIEF would be a detailed discussion of a significant finding with expert opinion, practice implications and implementation suggestions, as well as information sources.

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The Management Brief is produced by the Management Decision & Research Center, a program within the VA's Health Services Research & Development Service, Office of Research & Development. The purpose of the Management Brief is to provide VA senior managers with a concise and timely overview of a specific health care topic that includes topic definition, benefits, VA activities, research, and resources for further information.