QUERI Quarterly

NEWSLETTER OF THE QUALITY ENHANCEMENT RESEARCH INITIATIVE

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Director's Letter

QUERI's specific mission is to translate research results into improved patient outcomes and systems efficiency. Translation – and what it means to this process – is important for all of us to understand.

As scientists and clinicians, your focus has been on the research. The concept of translating your research may be new, perhaps even foreign. Many may even wonder why you should be bothered with what may appear to be an overwhelming task. After all, conducting research is complicated enough. Why take it a step further? Because if we fail to do so, the research cannot affect patient care, and improving patient care is our ultimate goal.

Scientific discoveries and innovations reach their full potential only when the research is put into practice. For QUERI to truly succeed, innovations and best practices must be translated into improvements in patient care and outcomes. Translation is so important to the success of the QUERI mission, it will be the focus of the 3rd QUERI Annual Meeting to be held in February, 2000 [See page 4 for more information]. Sessions discussing translation and offering technical assistance in regard to dissemination of research findings will be presented at the annual meeting. Working together, we can make the theory of translating research into practice a reality.

John G. Demakis, MD
Director, HSR&D

Methadone Maintenance:
A Cost-effective Health Care Intervention

*Paul G. Barnett, Ph.D.**
Director, VA HSR&D Health Economics Resource Center

VA cares for a substantial number of patients who are dependent on opiates. In FY98, 7,400 patients had almost 824,000 contacts with VA methadone maintenance clinics, and these numbers have been increasing at an annual rate of about 8% in recent years.[1] At the same time, methadone maintenance is available at only 34 VA facilities, and some of these programs are closed to new patients.[2] Methadone maintenance is effective in reducing drug use and risky injection practices,[3,4] but its use is controversial and its cost-effectiveness is unknown.

The Quality Enhancement Research Initiative Substance Abuse Module (QUERI SAM) undertook an analysis of the cost-effectiveness of methadone maintenance. The goal of this work was to find the incremental cost-effectiveness ratio of methadone – its cost per additional year of life gained. This measure is widely used to determine if new health care interventions are cost-effective, but it had not been previously determined for a substance abuse treatment.

The literature on methadone treatment outcomes and costs was reviewed, and a two-stage Markov model was constructed. We determined that providing opiate-dependent persons with access to methadone has an incremental cost of $5,915 per life-year gained. Sensitivity analyses determined that the cost was always less then $10,000 per life-year gained over a wide range of assumptions. This cost-effectiveness ratio is lower than that of many common medical therapies. For example, the incremental cost-effectiveness of medical therapy for severe hypertension has a ratio of $21,700 per life-year, and hemodialysis for chronic renal failure is $38,000 per life year.[5]

Previous economic studies of methadone maintenance have compared post-treatment behavior to a baseline survey and found that treatment reduces the costs that addicted individuals impose on the health, welfare and criminal justice systems, and losses from property theft and other crimes. These "before" and "after" comparisons have regarded death as a loss to follow-up. Prevention of death, however, is an important benefit of any health care intervention that needs to be considered. Moreover, the use of survival as an outcome provides a common denominator that allows substance abuse treatment to be

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In This Issue

GAF Scores Do Not Predict Substance Abuse Patients' 1-Year Treatment Outcomes

*Rudolf H. Moos, Ph.D., Lucie McCoy, and Bernice S. Moos**

Substance use disorders are extremely costly to veterans and the nation as a whole. The cost of substance abuse in the United States is more than $100 billion per year from alcohol and drugs, not counting nicotine.[1] In FY97, 24% of the 406,000 unique VA inpatients had a primary or secondary substance abuse or dependence diagnosis which accounted for 2.34 million days of inpatient care.[2] Needless to say, diagnosing and treating substance abuse is an extremely important health care issue.

The Global Assessment of Functioning (GAF) Scale is a standard component of the American Psychiatric Association's (APA) multidimensional diagnostic system, and is the single most widely used rating scale to assess impairment among patients with psychiatric and/or substance use disorders.[3] VA policy requires clinicians to use the GAF, which assesses mental health patients' current level of psychosocial functioning on 1-100 scale. According to the DSM-IV (Diagnostic Statistical Manual, Fourth Ed.), the clinician's ratings of current functioning reflect the patient's need for treatment and should be used for treatment planning.[4] However, although the GAF appears to be reasonably reliable and valid in a research context,[5] there is virtually no data on the value of the most prevalent use of the GAF – as a standard part of clinicians' regular diagnostic assessments. The QUERI SAM group asks how well a unidimensional rating scale, such as the GAF, reflects or predicts patients' combined symptom and social and occupational functioning outcomes?

To answer this question and determine how well the GAF predicts patients' 1-year symptom and social and occupational functioning outcomes, data were gathered from a sample of 1,688 VA patients with substance use disorders. With respect to their substance use disorder diagnoses, 37% of the patients were alcohol dependent only, 12% were drug dependent only, and 51% were dependent on both alcohol and drugs. In addition, 41% of the patients had a concomitant psychiatric diagnosis.

Patients' baseline functioning and 1-year outcomes were assessed with respect to psychological functioning (emotional distress, psychiatric symptoms, substance use), social functioning (residential stability, number of friends, quality of relationships), and occupational functioning (employment status, annual income). Patients were then divided into five groups, depending on clinicians' ratings of their current functioning according to a GAF of 1-100: pervasive impairment (1-40); serious impairment (41-50); moderate impairment (51-60); mild impairment (61-70); and minimal impairment (71-90). Several analyses were then conducted to identify the best independent predictors of clinicians' GAF ratings of patients' current global functioning, as reflected in the five GAF groups, and to correlate between GAF ratings and patients' 1-year outcomes.

Results of this study showed that patients' clinical diagnoses and psychiatric symptoms were stronger predictors of GAF ratings than was their current social and occupational functioning. For example, more impaired patients were likelier to have both alcohol and drug diagnoses, Axis 1 psychiatric diagnoses (e.g.,

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QUERI Quarterly is a quarterly publication of the Office of Research and Development's Health Services Research and Development Service. This newsletter discusses important issues and findings regarding the Quality Enhancement Research Initiative. QUERI focuses on the following conditions due to their high volume and/or high risk among VA patients: chronic heart failure, diabetes, HIV/AIDS, ischemic heart failure, mental health, spinal cord injury, stroke, and substance abuse. *QUERI Quarterly* is available on the Internet at http://www.va.gov/resdev/queri.htm or on the Internet at http://vaww.va.gov/resdev/queri.htm and on our FAX service by calling (617) 278-4492 (please follow voice prompts). For more information or to provide us with feedback, questions or suggestions, please contact:

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Methadone Maintenance

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compared to other medical care interventions. Additional studies using this type of analysis will be needed if there is to be parity between medical care expenditures and the funding of treatment for substance abuse and other mental disorders.

We are now refining this analysis to consider the impact of methadone maintenance on the use of health care resources, quality of life, and on the growth of the HIV epidemic. The results of this additional work support the findings of this QUERI SAM report, which found that methadone maintenance is a highly cost-effective use of health care resources.

This study shows that methadone maintenance is more cost-effective than other widely used medical care interventions in preventing death and, therefore, should be more widely available to veteran patients. However, VA policy makers may need additional information on the financial consequences of expanded access to methadone maintenance in order to implement this recommendation. These consequences include the direct cost of methadone maintenance as well as the cost of other health care, including anti-retroviral medications and other treatment provided to HIV positive veterans.

**Barnett PG., Methadone maintenance: A cost-effective health care intervention. A Report from the Substance Abuse Module, Quality Enhancement Research Initiative. Health Economics Resource Center, Center for Health Care Evaluation, VA Palo Alto Health Care System. 10/99*

References

1. Piette, JD, Baisden KL & Moos RH. Health services for VA substance abuse and psychiatric patients. Palo Alto, CA: Program Evaluation and Resource Center and HSR&D Center for Health Care Evaluation. 1999.
2. Hamilton E & Humphreys K. Outpatient methadone services in the Department of Veterans Affairs: Summary of clinic survey findings. Palo Alto, CA: Program Evaluation and Resource Center and Center for Health Care Evaluation, Department of Veterans Affairs. 1996.
3. Ball JC & Ross A. The effectiveness of methadone maintenance treatment. New York: Springer-Verlag. 1991.
4. Marsch LA. The efficacy of methadone maintenance interventions in reducing illicit opiate use, HIV risk behavior, and criminality: A meta-analysis. Addiction, 93;515-532, 1998.
5. Mark DB, Hlatky MA, Califf RM, et al. Cost effectiveness of thrombolytic therapy with tissue plasminogen activator as compared with streptokinase for acute myocardial infarction. New Eng J Medicine, 332; 1418-1424, 1995.

GAF Scores

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psychoses), and medical diagnoses. Moreover, GAF ratings were only minimally associated with patients' 1-year psychological, social, and occupational functioning outcomes.

These findings imply that, as currently employed in VA, clinicians' GAF ratings of substance abuse patients' global functioning cannot be used as adequate predictors of patients' treatment outcomes. The VA needs to work with the APA and other professional mental health organizations to identify better standard measures of patients' psychosocial functioning. QUERI SAM is looking into alternative measures. Once they are identified, VA clinicians should be trained in their use, and the measures' reliability and outcome-based validity should be evaluated.

**Moos RH, McCoy L, Moos BS. Global Assessment of Functioning (GAF) Scores: Clinicians' rating do not predict substance abuse patients' 1-year treatment outcomes. A Report from the Substance Abuse Module, Quality Enhancement Research Initiative. Center for Health Care Evaluation, VA Palo Alto Health Care System. 9/99*

References

1. Department of Health and Human Services. Ninth special report to the U.S. Congress on alcohol and health. Washington, DC: Government Printing Office (NIH Publication 97-4017). 1997.
2. Piette JD, Baisden KL, Moos RH. Health services for VA substance abuse and psychiatric patients: Utilization for Fiscal Year 1997. Palo Alto, CA: Program Evaluation and Resource Center and HSR&D Center for Health Care Evaluation. 1998.
3. Piersma HL, & Boes JL. Agreement between patient self-report and clinician rating: Concurrence between the BSI and the GAF among psychiatric inpatients. Journal Clin Psychology, 51;153-157, 1995.
4. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (4th ed.). Washington, DC. 1994.
5. Tracy K, Adler LA, Rotrosen J, et al. Interrater reliability issues in multicenter trails, part 1: Theoretical concepts and operational procedures used in Department of Veterans Affairs cooperative study, #394. Psychopharmacology Bulletin, 33; 53-57, 1997.

QUERI Annual Meeting 2000

The third annual QUERI meeting will be held on February 2-3, 2000 in Reston, VA. The theme of this year's meeting will be "Translating Research into Practice." The annual meeting brings together the QUERI Executive Committees and members of the eight QUERI Coordinating Centers to focus on their specific group plans and processes. This meeting also serves as an opportunity for QUERI leaders and participants to discuss a broad array of important cross-cutting issues affecting the QUERI process. For further information about this meeting, contact Lynn McQueen, Dr.P.H., R.N., Associate Director for HSR&D QUERI, at (202) 273-8227 or e-mail at lynn.mcqueen@mail.va.gov.

DEADLINE FOR NEXT ISSUE: January 28, 2000

QUERI Quarterly is glad to accept submissions for publication consideration. Please submit articles, updates or other information of interest to our readers by Friday, January 28, 2000 for publication in our March issue. E-mail submissions to diane.hanks@med.va.gov or call Diane Hanks at 617-232-9500 x5055 for more information.

QUERI STROKE UPDATE

QUERI Stroke focuses on key elements in the prevention, treatment management, and rehabilitation of patients with stroke. As part of these efforts, QUERI Stroke developed the Acute Stroke Management Toolbox, which serves as a blueprint for high quality stroke care in VHA. The Toolbox can be accessed on QUERI Stroke's home page at http://hsrd.durham.med.va.gov/queri/default.htm.

QUERI Stroke is also working on a facility-level survey to understand how sites engage in Systematic Anticoagulation Management for patients with atrial fibrillation. This survey is almost complete and is now being linked to a system-wide informatics effort to identify patients with atrial fibrillation. Post-stroke rehabilitation efforts include validation of ICD-9 algorithms used to identify stroke patients across sites. Risk adjusted models will be used to identify facilities for targeted intervention, and a manuscript has been submitted for publication.

QUERI is on the Web!

Dissemination of research information is key to QUERI's success. Electronic dissemination via the web is an important part of this effort. HSR&D's web allows researchers, clinicians, providers, and policy makers easy access to vital QUERI information that includes ongoing research, funding opportunities, training opportunities, clinical practice guidelines, QUERI product information, QUERI publications, associated web links, affiliated Center information, and group contact information. The national HSR&D QUERI web site is located on the internet at http://www.va.gov/resdev/queri.htm and on the intranet at http://vaww.va.gov/resdev/queri.htm. It provides access to general QUERI information, QUERI publications such as the *QUERI Quarterly*, the national QUERI newsletter, and QUERI Fact Sheets, as well as updates and links to individual QUERI groups' web pages.

Websites for the QUERI groups on Chronic Heart Failure, Diabetes, HIV/AIDS, Spinal Cord Injury, and Stroke QUERI can be accessed via the national QUERI website. Websites for Ischemic Heart Disease QUERI, Mental Health QUERI, and Substance Abuse are currently under construction.