HSR&D
HEALTH SERVICES RESEARCH & DEVELOPMENT

Translating Research into Improved Patient Care

Strategic Planning Guide

FY 2004-2008

Center for Health Care Evaluation

HSR&D Center of Excellence

VA Palo Alto Health Care System

March 7, 2003

Center for Health Care Evaluation: Strategic Planning Guide

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I. Executive Summary

The Center for Health Care Evaluation (CHCE) strives to improve VA health care practices and patients' outcomes by creating and applying new knowledge to inform clinical practice, serving as a resource to health policy decision makers, and providing high-quality health services research training. These contributions stem from our six main strengths: outstanding staff, a guiding conceptual framework, well-established interdisciplinary collaborations, effective integration with local and national resources, strong involvement in the Quality Enhancement Research Initiative, and proven ability to leverage core support. CHCE initiatives support VHA Goals and Objectives and the HSR&D Service Strategic Plan.

Mission and Goals

CHCE's mission is to promote high quality, cost-effective health care for veterans and for the nation's population as a whole by conducting, disseminating, and promoting the clinical application of state-of-the-art health services research in two areas that have been our primary foci since the Center's inception as an HSR&D Field Program in 1985:

- the process and outcome of treatment for substance use and psychiatric disorders; we determine what treatments work, how to tailor treatment to patients' needs and conditions, and how to better apply findings to improve patient care

- clinical decisionmaking, screening, and diagnostic assessment; to aid staff in clinical practice, we refine clinical decisionmaking techniques and examine the effectiveness and cost-effectiveness of screening and diagnostic methods.

Our work also has two areas of secondary focus:

- the organization and delivery of health care services; we identify how to organize health care services efficiently to best meet the needs of patients with chronic diseases

- health care research methodology; to better attain our other research goals, we improve techniques for measuring program characteristics, health status, patient utilities for health states, and outcomes.

Developing and Applying New Knowledge to Improve Patient Care

In the next five years, we expect to make substantial contributions in each of these four areas. In addition, we will continue to be a nationwide focal point for synthesizing and disseminating information on practice guidelines for, and/or new knowledge about prevention, screening, and effective treatments for several diseases - substance use disorders (SUDs), HIV/AIDS, hypertension, heart failure, and cancer. In each area, we will continue to provide evidence-based policy recommendations to VA and other federal and community decision makers, and to disseminate and implement clinical and policy applications of our research findings.

Substance Use and Psychiatric Disorders. The high prevalence of substance use disorders (SUDs) in VA patients (21% of 358,600 unique VA inpatients and 10% of 4.05million VA outpatients, in FY01) and psychiatric disorders (16% of VA inpatients without concomitant SUDs and 18% of VA outpatients without concomitant SUDS, in FY01) is the primary reason for our focus in this area. We will continue to track the changing nature of VA SUD and psychiatric patients and programs, conduct outcome evaluations of major SUD and psychiatric treatment modalities, and identify characteristics of care associated with better outcomes among subgroups of high-risk or underserved patients. We also will continue to investigate the value of self-help and mutual support groups as adjuncts to formal SUD and psychiatric care, study the long-term course of treated and untreated substance use and psychiatric disorders, and determine ways to improve medical care for patients with psychiatric disorders and for those who have experienced traumas.

These projects afford opportunities for fundamental changes in the way SUD treatment is delivered, for improved patient outcomes, and/or for cost savings. For example, our prior research findings showed that SUD patients who regularly have two outpatient mental health care contacts per month do as well as patients who have more intensive outpatient care. If these findings are replicated and the VA were to implement a policy regulating outpatient mental health care to an average of two contacts per month, the cost savings could reach $50 million per year.

Clinical Decisionmaking, Screening, and Diagnostic Assessment. Given the high patient loads of most health care providers, efficient methods to screen and diagnose patients, and to quickly determine appropriate treatments, are critical. We are identifying cost-effective strategies to improve the screening, prevention, and management of HIV disease, cardiovascular disorders, and cancer. In the area of HIV, we are focusing on developing the scientific basis for a VA HIV screening guideline, assessing the health and economic benefits of antiretroviral therapies, and improving antiretroviral medication adherence. By enhancing patients' medication adherence, VA can delay or prevent severe complications and unnecessary treatment costs, and perhaps forestall the development of drug-resistant HIV strains. We also are examining the cost-effectiveness of other interventions to prevent and slow the spread of HIV disease.

Within the sphere of cardiovascular disorders, we are developing methods to improve physicians' adherence to hypertension management guidelines, to define preferred strategies for identifying patients at high risk for sudden cardiac death, and to treat ventricular arrhythmias. These projects have important clinical and translation implications. Two approaches that CHCE investigators are using to translate empirical evidence into improved clinical care – web-based, tailored decision support and active processing of electronic medical records with electronic transmission of tailored practice recommendations to providers - are cutting-edge and can be applied to the treatment of a variety of medical and mental health conditions. To begin integrating work in our two primary research areas, our Strategic Plan includes an initiative to use one of these decision support approaches to enhance clinical practice with respect to the pharmacologic treatment of substance use disorders.

In the field of cancer prevention and treatment, we are examining the cost-effectiveness of detecting and treating breast cancer and common cancers among older patients, developing a web-based decision support tool for helping clinicians order and interpret diagnostic test results, and evaluating the use of CT for screening, and PET scanning for staging, lung cancer. Because the results the National Lung Screening Trial will not be available until after 2010, CHCE interim findings should help to inform decisionmakers regarding the adoption of low-dose CT for the early detection of lung cancer.

Organization and Delivery of Services. Consistent with VHA Objectives 2 and 18, we focus on improving the organization and delivery of health care services. We are examining how health care system factors, hospital organization, and market forces influence patients' demand for and the cost of care. By identifying successful models of health care delivery and financing, we contribute to VA policies that increase patients' access to and the cost-effectiveness of care. We also are developing and evaluating interventions to improve the efficiency and effectiveness of outpatient care, particularly for patients with heart failure and those with substance use disorders (SUDs).

We are studying global healthcare factors that affect treatment for Alzheimer's disease, as well as the treatment and well-being of elderly patients in general, and at the end of life. Information from these projects will inform care for the large number of Vietnam era patients that the VA will be treating over the next 20+ years. We also are determining how health care staff members' knowledge can enhance the quality and outcome of care with respect to pain management and management of the alcohol withdrawal syndrome. Other important research will focus on patient safety, as affected by organizational factors and provider fatigue. We also will disseminate and implement evidence-based practices among healthcare staff with respect to care for post-traumatic stress disorders (PTSD). If successful, these translation interventions can be disseminated throughout VA to enhance staff performance and improve PTSD patients' outcomes.

Our last strategy in this area focuses on enhancing the VA's capacity to respond to bioterrorism. We will assess whether the delivery of healthcare services in response to bioterrorism events can be regionalized and will

develop informatics tools to aid in the detection of biological outbreaks. This work will contribute to VHA Goal 4 (improve the Nation's preparedness for response to terrorism).

Health Care Research Methodology. High-quality health services research requires high quality methodology. We are developing measures of patients' health state preferences and decisionmaking with respect to health care, as well as screeners for SUDs in primary and psychiatric care settings. We also will refine measures of health care program characteristics, formulate more efficient ways to develop and disseminate practice guidelines, and determine the generalizability of findings from randomized clinical trials (RCTs), given the exclusion criteria imposed. Given their broad applicability, our advances in these areas will contribute to better patient care by enhancing the relevance, efficiency, and clinical and policy implications of health services research.

Providing Expert Guidance and Training Health Services Researchers

We serve on national VA review committees, help coordinate or have close liaison with four QUERI modules, work collaboratively with several of the HSR&D Centers of Excellence, the Health Economics Resource Center, the Palo Alto Cooperative Studies Program Coordinating Center, and the VISN 21 Mental Illness, Research, Education and Clinical Center (MIRECC), and provide guidance to investigators nationwide in our areas of knowledge. We also furnish expertise to VA Central Office, assist the Sierra-Pacific Network in its initiatives, and help local investigators develop fundable research proposals. Core and affiliated staff serve on advisory and review boards of other federal and private research centers, academic and professional societies, and leading professional journals.

We provide high-quality health services research and medical informatics training. The varied areas of expertise of our investigators allows us to maintain a cadre of outstanding mentors who help recruit and train diverse postdoctoral fellows, and provide them access to unique resources to conduct VA-relevant research. Consistent with the HSR&D Service Strategic Plan's Initiative 9, our goals are to increase the breadth and integration of our training programs and to recruit the top health services research and medical informatics fellows into VA careers.

Improving through Critical Self-Appraisal

We conduct regular internal reviews of our goal performance in each of the foregoing areas and incorporate the feedback they yield. With input from our consumers and Steering Committee, we monitor our progress in research, dissemination, translation, technical assistance, and training with respect to established milestones. We also evaluate individual staff members' performance and promote their professional advancement. Our goal is to become the model HSR&D Center of Excellence in the nation.

II. Outline of Goals and Initiatives

Goal 1. Conduct high-quality health services research that results in more effective and cost-effective care for veterans and for the nation's population as a whole. Develop new knowledge in four areas:

1.1. The process and outcome of treatment for substance use and psychiatric disorders: (1) Characterize the changing nature of VA SUD and psychiatric patients and treatment programs; (2) Conduct outcome evaluations of major SUD and psychiatric treatment modalities; (3) Identify characteristics of care associated with better outcomes among subgroups of high-risk or underserved patients; (4) Examine the value of self-help and mutual support groups as adjuncts and alternatives to formal SUD and psychiatric care; (5) Compare the long-term course of treated and untreated substance use and psychiatric disorders; and (6) Improve medical care for patients with psychiatric disorders and trauma victims. Initiatives in this last area are anticipated to lead to additional projects that focus on patients with both medical and psychiatric disorders.

1.2. Clinical decisionmaking, screening, and diagnostic assessment: (1) Identify cost-effective strategies for prevention and treatment of HIV disease; (2) Identify effective strategies for improving the management of cardiovascular disorders; (3) Identify cost-effective strategies for screening, diagnosing, staging and treating cancer;

and (4) Improve screening for depression in primary and mental health care settings, and clinical decisionmaking in the pharmacologic treatment of SUD patients. This last initiative integrates work in our two primary areas.

1.3. The organization and delivery of health care services: (1) Identify how health care system factors, hospital organization, and market forces influence patients' demand for and the cost of care, and patient outcomes; (2) Implement and evaluate interventions to improve the efficiency and effectiveness of outpatient care; (3) Determine how health care staff members' knowledge and practices enhance the quality, safety, and outcome of care; and (4) Enhance the VA's organizational capacity to respond to bioterrorism. Initiatives in this last area are particularly timely.

1.4. Health care research methodology: Develop reliable and valid measures of (1) patients' health status and outcomes and (2) the characteristics of health care programs; (3) Formulate more efficient methods to develop and disseminate outcome-based practice guidelines; and (4) Determine the limits on generalizability of health care findings from RCTs given the imposition of highly selective exclusion criteria. Successful application of RCT findings to improve clinical care depends on the generalizability of those findings.

Goal 2. Disseminate and translate findings into clinical practice to improve veterans' health care

To accomplish Goal 2 and our remaining goals, we will pursue a variety of strategies. We will (1) provide consumers with information about research findings and clinical and policy applications; (2) promote awareness of health services research findings and applications to the broader professional and lay community; and (3) translate research findings into clinical practice.

Goal 3. Provide technical expertise and guidance to national and local organizations and to individuals

We will provide technical expertise and guidance to VA Central Office (HSR&D Service, Office of Research and Development, Mental Health Strategic Healthcare Group), the Sierra Pacific Network, local VA facilities and investigators, and the broader health services research community.

Goal 4. Provide high-quality health services research and medical informatics training

We will (1) link outstanding mentors and fellows with exceptional educational resources and (2) will expand and integrate postdoctoral training and career opportunities.

Goal 5. Evaluate and improve the Center's activities and enhance Center staff professional development and expertise

We will (1) obtain and incorporate feedback from internal reviews and consumers on goal performance with respect to research, dissemination, implementation, technical services, and training; and (2) evaluate staff members' performance and promote staff development.

III. Strengths

CHCE has six main strengths that contribute to its productivity as a Center of Excellence in health services research: (1) outstanding staff, (2) a guiding conceptual framework, (3) well-established interdisciplinary collaborations, (4) effective integration with local and national resources, (5) strong involvement in the HSR&D Quality Enhancement Research Initiative, and (6) proven ability to leverage core support.

Outstanding Staff

CHCE core and affiliated staff members have outstanding qualifications. CHCE's Director, Dr. Finney, is a widely-recognized expert on the quality and outcome of treatment for substance use disorders, an area in which he has worked for over 25 years. One of the Center's Associate Directors and HSR&D Service's first Career Development Awardee, Dr. Garber, is internationally-known for his research on the health economics of aging, screening for

cardiovascular disease, and patient preference assessment. Our other Associate Director, Dr. Timko, a Research Career Scientist, is a highly-regarded expert on the organization and quality of SUD and psychiatric treatment, and the long-term course of treated and untreated substance use disorders. CHCE's Director Emeritus, Dr. Moos, was the first recipient of the Undersecretary's Award for Achievement in Health Services Research. He will continue as an active investigator in the CHCE and his expertise spans instrument development, evaluation of treatments for substance use and psychiatric disorders, health care policy, and administration and management.

A key aspect of the Center's strength stems from the core staff's blend of basic and applied research skills. CHCE's core staff include a medical sociologist (Dr. Cronkite), a clinical psychologist trained in treatment evaluation research (Dr. Kelly), and experts on late-life substance use disorders (Dr. Brennan), linkages between formal and informal health services (Dr. Humphreys), quality of psychiatric and residential care (Dr. Lemke), and clinical practice guidelines (Dr. Schutte), as well as health economists (Drs. Barnett, Phibbs, Smith, Wagner, and Yu).

CHCE also has former Career Development Awardees and current Investigators who are experts on practice guidelines for HIV and for preventing sudden cardiac death (Dr. Owens), and on methods to assess patient preferences and implement practice guidelines for managing hypertension (Dr. Goldstein). The research of Dr. Frayne, an Advanced Career Development Awardee who joined the CHCE in 2002, focuses on the treatment of patients with both medical and psychiatric disorders. Other Career Development Awardees are studying diagnostic assessment and staging for lung cancer (Dr. Gould), the cost-effectiveness of management strategies for heart failure and valvular disease (Dr. Heidenreich), treatment of prostate cancer (Dr. Knight), detection and treatment of coronary heart disease and congestive heart failure (Dr. Shlipak), and treatment of depression in medical patients (Dr. Whooley). Dr. Trafton is a recent recipient of a Merit Review Entry Program (MREP) Award, and is beginning what promises to be a highly productive research career. Other Center Investigators include two nurses (Drs. Douglas, Schaefer) and experts in patient safety (Gaba, Howard), Internet dissemination strategies (Dr, Weingardt), substance use disorders (Drs. McKellar and Tiet), and PTSD (Dr. Rosen).

Guiding Conceptual Framework

A significant portion of CHCE's research is guided by a conceptual model that focuses on the underlying processes that link health care system and patient factors to the outcome of treatment for chronic diseases. The model considers the health care system in terms of its physical features, organizational structure and policies, casemix, and types of health care tasks. These factors affect the selection and allocation of services, the implementation and process of care, and the workplace and staff morale and performance. In turn, each of these sets of factors influences health care outcomes. The framework also takes into account the social environmental factors that affect adherence to treatment and maintenance of treatment gains.

Our framework has helped us identify the need for better assessment procedures in specific content domains and enabled us to develop conceptually integrated research programs. For example, following the framework, we are continuing the development of an inventory to assess the quality of SUD and psychiatric programs. More generally, we use CHCE's conceptual framework to identify new research questions, relevant factors to assess, and needed collaborative relationships.

Well-established Interdisciplinary Collaborations

CHCE staff are an effective interdisciplinary team, respect and enrich each other's work, and have produced a distinguished body of research. Core staff members collaborate effectively with each other in research that integrates disciplinary lines of expertise, such as health economics, clinical decisionmaking and mental health services research. Overall, the majority of our publications involve core staff co-authors of different disciplines. We also maintain productive cross-disciplinary collaborations with other VA and University-based experts. These collaborations include investigators at the Durham, Little Rock and Bedford COEs, and involve joint projects with researchers in several medical specialties (including anesthesiology, cardiology, gerontology, infectious disease, psychiatry, and surgery), in allied health care areas (such as nursing, psychology, sociology, and social work), and in other cognate disciplines (such as biostatistics, computer science, and economics). In addition, we have focused on the policy implications of

our work in joint publications with VA managers. These collaborations enable us to make fundamental conceptual, empirical, and policy-related contributions to health services research and health care practices.

Effective Integration with Local and National Resources

CHCE draws strength from effective working relationships with local and national resources. We are closely linked with VA Palo Alto Health Care System's (HCS's) Research Administration Service, Office of Academic Affairs, all of the major clinical and administrative services, and each of the national centers located at our facility, including the Health Economics Resource Center, the Cooperative Studies Program Coordinating Center, the Geriatric Research, Education, and Clinical Center (GRECC), and the Mental Illness Research, Education, and Clinical Center (MIRECC). We also are affiliated with four VA facilities in our Network, the Fresno, Reno, and San Francisco VAMCs, and the Northern California System of Clinics, and have longstanding relationships with the staff of the newly-established REAP at the San Francisco VA. Drs. Finney and Moos serve on the Steering Committee for the REAP and Dr. Chren, the REAP Director, is a member of the CHCE Steering Committee.

Core staff have Stanford University appointments in the Departments of Medicine, Economics, Psychiatry, Sociology, and Health Research and Policy. In addition, we are linked to Stanford through our Steering Committee and our VA and AHRQ training programs. Our close ties with the National Bureau of Economic Research, and our connections at UC San Francisco and UC Berkeley, which include an affiliation with the Institute for Health Policy, also enhance our research and training programs.

CHCE benefits from close working relationships with VA Central Office. Our advisory roles with the Mental Health Strategic Healthcare Group (MHSHG) allow us to help shape policy changes in VA SUD treatment and to plan research to evaluate them. Our ties to MHSHG and its Centers of Excellence in Substance Abuse Treatment and Education (CESATEs) also contribute to our ability to gather or obtain relevant data on VA practice patterns and to implement translation projects to apply evidence-based treatment practices. Core staff's ongoing involvement in developing and refining practice guidelines has alerted us to barriers to guideline implementation and spurred new research on how to overcome such barriers. Our projects tracking VA SUD programs have enabled us to develop working relationships with clinical staff at many VA facilities. Consistent with the HSR&D Service Strategic Plan's Objective 1 under Goal 4, these connections enable us to implement new projects and disseminate and translate findings quickly.

Strong Involvement in the HSR&D Quality Enhancement Research Initiative

Although generating useful, applicable health services knowledge always has been a goal of CHCE, the extensive involvement of CHCE staff in the Quality Enhancement Research Initiative (QUERI) has afforded another important mechanism for implementing that goal. Dr. Finney is the Research Coordinator, and Dr. Kelly is one of two Translation Coordinators, for the Substance Use Disorders QUERI. In that capacity, and consistent with the HSR&D Strategic Plan (Goal 4, Strategy B), Dr. Kelly is working to develop the knowledge and experience that will allow him to be a leader in translation and translation research. CHCE Investigators, Drs. Barnett, Humphreys, Moos and Schutte, are members of the SUD QUERI's Executive Committee. Dr. Owens is a member of the HIV QUERI Executive Committee, Drs. Goldstein and Heidenreich serve on the IHD QUERI Executive Committee, and Dr. Massie is a member of the CHD QUERI Executive Committee. Work by Center Investigators has supported QUERI translation projects. For example, Dr. Barnett's work on the cost-effectiveness of methadone was part of the foundation for the SUD QUERI's first translation project to improve access to, and the quality of, methadone maintenance treatment for opioid dependence. Currently, Dr. Heindenreich is conducting a project to examine quality of heart failure care across the VA in conjunction with the CHD QUERI. Our strong involvement in the QUERI supports HSR&D Service's goal of effectively transferring research results to advance veterans' healthcare.

Proven Ability to Leverage Core Support

We obtain substantial amounts of project-specific (non-core) funding from HSR&D, other VA sources, and other government and private agencies. In FY02, our core funding was $594,000. During that year, core and affiliated

staff members' project funding was $4,563,500 from NIH, $1,281,500 from VA MHSHG, and $1,043,700 from HSR&D's IIR and SDR programs, with additional funding of $7,532,700 from other VA, other federal, and nonfederal sources. In the prior four fiscal years, our core funding averaged $589,500, whereas our additional funding averaged $14,664,200, a ratio of 25 to 1.

IV. Challenges

CHCE faces challenges related to changes in the SUD health care environment, the Health Insurance Portability and Accountability Act (HIPAA), space and infrastructure, protected time for clinician researchers, and hiring VA staff.

Changes in the SUD health care environment. A significant challenge in applying our research on treatment for substance use disorders is the changing VA health care environment in which such treatment is offered. A recent Program Evaluation and Resource Center report indicated that the number of VA outpatients with SUDs increased by 131% between FY95 and FY01. Nevertheless, another PERC report found that the total number of VA SUD treatment programs declined from 386 in FY94 to 246 in FY00, while the number of VA SUD staff declined from 4,700 to less than 2,500. Similarly, a Health Economics Resource Center report indicates that spending for SUD treatment in the VA declined by 41%, and the portion of VA patients receiving SUD care declined from 5.1% to 4.1% between 1993 and 1999. These reductions in specialized resources for the care of the increasing numbers of patients with substance use disorders make it more difficult to apply our research findings to improve SUD care.

Health Insurance Portability and Accountability Act. Center for Health Care Evaluation staff, along with researchers throughout the VA, face the challenge of successfully implementing the requirements of the HIPAA Privacy Rule. To help meet this challenge, we have appointed Jeanne Schaefer, PhD, as our HIPAA Coordinator. As our local HIPAA expert, Dr. Schaefer will maintain a file of current HIPAA requirements, inform CHCE staff of new HIPAA developments, and serve as the CHCE HIPAA liaison to the VAPAHCS R&D office and Stanford/VA IRB. To ensure that CHCE PIs have a good understanding of HIPAA requirements, we will provide staff with additional HIPAA training to supplement the on-line HIPAA training offered by the VA. We will offer a periodic workshop for staff that will (a) discuss the implications of HIPAA requirements for Center projects, (b) review staff responsibilities with regard to the use and disclosure of protected health information, (c) explain the importance of only accessing the information necessary to conduct their research, and (d) teach staff how to properly de-identify information that is shared with collaborators outside the VA. We also are working to put in place administrative mechanisms to ensure that appropriate HIPAA-related documentation is kept for all projects (for example, documentation of waivers, data use agreements for limited data sets, and representations).

Space and Infrastructure. After being housed in two divisions of the VAPAHCS, CHCE is now consolidated in Building 205 at the Menlo Park Division. However, there are plans to demolish Building 205 and move CHCE to Building 4 at the Palo Alto Division, perhaps in FY04. We will need to work closely with the VA Palo Alto HCS Administration to ensure that sufficient and appropriate space is available for CHCE, and that the units with which CHCE works closely are housed nearby so that our collaborative efforts can continue unimpeded. Fortunately, Dr. Barnett serves on the R&D Service Space Committee, so that we can monitor developments closely. Infrastructure problems with computer and network support that we experienced in past years, largely have been resolved. This resolution was fostered by CHCE's contributing to the purchase of network equipment (e.g., hubs and routers) and the hiring of a computer/network specialist, who also is responsive to COE staff needs. We will work hard to retain this support when the move to the Palo Alto Division occurs.

Protected Time for Clinician Researchers. To try to protect clinician researchers' time to devote to research, we encourage clinicians to seek HSR&D Career Development Awards. We also work with local and Network staff to raise awareness of the benefits of research. We look forward to the planned allocation by R&D of funds to cover appropriate portions of physicians' clinical time to allow them to focus on their funded research.

Hiring VA Staff. Several hiring issues pose challenges. We are unable to hire non-U.S. citizens, even though these individuals often have outstanding qualifications. Hiring and promotion processes are cumbersome and

demanding. Finding and retaining qualified staff with administrative or data analysis skills is difficult because of our proximity to Silicon Valley, where there is strong demand for these skills and the resources and flexibility to pay high salaries. This situation has been mitigated somewhat, however, by the economic downturn in the past two years. To address these issues, we work closely with staff in Human Resources; write specific selective factors; track, monitor, and follow up on all personnel actions; and keep employees well-informed about the hiring and promotion process.

V. Goals and Initiatives

Below are our Goals, Objectives, Strategies, and planned Initiatives for FY04-08. Unless otherwise indicated, the products from the initiatives will be research reports published in professional journals or other outlets.

Goal 1. *Conduct high quality health services research that results in more effective and cost-effective care for veterans and for the nation's population as a whole*

Objective 1.1. Develop and apply new knowledge about the process and outcome of treatment for substance use and psychiatric disorders

Strategy 1.1A. Characterize the changing nature of VA SUD and psychiatric patients and programs

Initiative 1.1A1. *Monitor trends in VA SUD patients' characteristics and care*

To understand the changing nature of the VA SUD treatment system, we plan to extract and summarize demographic, diagnostic, and health care utilization information annually from VA patient databases on all SUD patients nationwide (McKellar).

Initiative 1.1A2. *Characterize and monitor the performance of VA specialized SUD treatment programs*

To examine the effects of VA policy initiatives and identify issues for new outcome evaluations, we will (1) obtain data on staffing, services, policies, and treatment orientations from triennial surveys of VA SUD program managers (Humphreys); (2) compare the characteristics of SUD and psychiatric programs (Timko); and (3) obtain information annually from VA nationwide utilization databases on process indicators of SUD program performance (McKellar).

Initiative 1.1A3. *Characterize changing standards of care for patients with psychiatric disorders*

To understand the changing standards of care for patients with mental illness, we will (1) compile VA pharmacy, utilization, and cost data for specialized mental health care facilities; (2) track trends in the mix of inpatient, residential, and outpatient care for patients with psychiatric disorders; and (3) track trends in prescriptions for major classes of psychotropic medications (Smith with Chen).

Initiative 1.1A4. *Establish a practical system to monitor SUD patients' outcomes and care*

To determine whether the VA SUD treatment system as a whole is improving, in collaboration with the SUD QUERI, we will (1) continue to implement an effective system to monitor VA SUD patients' outcomes and care; (2) determine the effectiveness of different types of treatment and episodes of care); (3) examine the association between guideline concordant care and patients' outcomes; (4) determine the cost-consequences and cost-effectiveness of VA SUD care; and (5) compare VA and non-VA patients' outcomes (Finney, Tiet, Barnett).

Strategy 1.1B. Conduct outcome evaluations of major SUD and psychiatric treatment modalities

Initiative 1.1B1. *Conduct meta-analytic and narrative reviews of the SUD treatment outcome literature*

To provide a basis for updating SUD treatment guidelines, we will conduct meta-analyses to (1) determine the effectiveness of contingency management interventions in improving SUD treatment outcomes (Finney, Humphreys, with Prendergast and SUD QUERI); (2) identify the relative efficacy of anti-craving, anti-anxiety, anti-depressive, and anti-dipsotropic medications in treating alcohol dependence (Finney with SUD QUERI); and (3) review evidence on the influence of therapist, family, and peer relationships on the treatment process and outcome for patients with SUDs and make evidence-based recommendations for clinical practice (Moos, Kelly).

Initiative 1.1B2. *Identify cost-effective regimens of outpatient SUD care*

To identify the most effective duration and amount of outpatient SUD care, we plan to (1) determine the extent to which more participation in professional treatment contributes to better outcomes versus the extent to which worse outcomes lead to more participation in treatment (Moos); (2) determine risk factors for short- and long-term nonremission among individuals with alcohol use disorders, and examine the role of a longer duration of professional treatment in increasing the likelihood of remission (Moos); and (3) clarify the process by which specific treatment environments help SUD patients transition into post-discharge social contexts that support effective coping and abstinence (Moos, McKellar with Gifford).

Initiative 1.1B3. *Identify cost-effective treatments for opiate-dependent patients*

To examine the cost-effectiveness of alternative treatments for opiate dependence, we will (1) link costs to outcomes for standard care, a voucher for methadone treatment, referral to a case manager, or both vouchers and referral for patients initially seen in an emergency room (Barnett with Sorenson); (2) determine the cost-effectiveness of an intervention to improve adherence to medications prescribed for HIV disease among methadone maintenance patients (Barnett); (3) compare patients' outcomes in VA methadone clinics that vary in how well they adhere to clinical practice guidelines (Humphreys, Trafton, Barnett); and (4) examine the mortality and health care utilization consequences of following clinical practice guidelines in methadone treatment (Humphreys).

Initiative 1.1B4. *Examine associations between SUD programs' continuity of care practices and patients' outcomes, use of mental health services, and healthcare costs*

We will (1) identify the continuity of care services that are associated with patients' completion of intensive treatment, greater engagement in continuing care, and improvements in symptoms and functioning; (2) identify patient and program factors that predict the amount and type of continuity of care services staff provide to patients; (3) identify subsets of patients who respond differentially to specific continuity of care services (Schaefer, Cronkite); and (4) examine the associations between specific dimensions of continuity of care and patients' use of health services and the costs of care (Schaefer, Yu, Cronkite).

Strategy 1.1C. Identify characteristics of care associated with better outcomes among subgroups of high-risk or underserved patients

Initiative 1.1C1. *Evaluate tailoring treatments for patients with both SUDs and psychiatric disorders*

To examine patient-tailored treatment strategies, we will (1) determine whether matching based on program services and structure, and the severity of patients' impairment, results in more effective and cost-effective treatment as gauged at a 1-year follow-up (Timko, Barnett); and (2) complete an examination of the cost and outcome of a smoking cessation program for depressed patients with tobacco use disorders (Barnett [Hall, PI]).

Initiative 1.1C2. *Evaluate the effect of guideline concordant care on patients with both substance use and psychiatric disorders*

To determine current practices and their effects in treating patients with comorbid substance use and psychiatric disorders, we will (1) use archival data to describe the patterns of VA care received by patients with SUDs

and unipolar depression; (2) compare health service utilization outcomes for patients who do and do not receive guideline concordant care (Schutte); and (3) identify system, program, clinician, and patient factors that are associated with better psychiatric symptom and substance-related outcomes, quality of life, and treatment satisfaction among dual diagnosis patients (Tiet, Schutte, Rosen).

Initiative 1.1C3. *Identify correlates of PTSD and mediators of its effects on health and health-related quality of life*

We will (1) examine the associations of PTSD with poor health and health-related quality of life among women and men patients in primary care, and consider if the way in which anger is expressed (internally or externally) mediates those relationships (Moos, Cronkite with Ouimette); (2) specify risk factors for medical conditions and poor functioning among PTSD patients (Moos, Cronkite with Ouimette); and (3) determine the risk of psychiatric disorders, substance use disorders, and suicidality associated with adverse life events and trauma among veterans and non-veterans who have experienced high levels of adverse life events and war-related trauma (Tiet).

Initiative 1.1C4. *Examine the role of personal, life context and coping factors in drinking problem relapse and recovery from drinking problems among older adults.*

To better understand recovery from late-onset or recurrent alcohol problems, we will (1) identify coping, stressors, alcohol expectancies and other factors associated with remission among treated and untreated problem drinkers in a community sample; and (2) consider whether such success leads to increased feelings of mastery and self-efficacy and better health- and alcohol-related outcomes (Brennan, Moos, Schutte).

Initiative 1.1C5. *Determine the prevalence and characteristics of patients with SUDs in extended care*

To clarify the impact of SUD patients on extended care, we will (1) determine whether the prevalence of SUDs among VA extended care patients has increased in recent years, (2) determine whether the prevalence of SUD is higher among younger patients in extended care, and (3) compare demographic and diagnostic characteristics, functioning, behavioral problems, and use of VA health services of younger and older extended care patients with and without SUDs (Lemke, Schaefer).

Initiative 1.1C6. *Identify treatment services predictive of better outcome among patients with late-life substance use disorders*

To examine late-middle-aged and older SUD patients' service use and predictors of treatment outcome, we will (1) assess the role of patient characteristics and treatment services in predicting remission and relapse of late-life alcohol abuse; (2) assess these patients' long-term patterns of health services use; (3) compare VA and Medicare patterns of treatment for these patients; and (4) compare the functioning, health services use, and treatment outcomes of older VA nursing home unit residents with and without alcohol use disorders (Brennan, Lemke, Schaefer).

Initiative 1.1C7. *Examine the development of late-life alcohol use problems and factors associated with remission and relapse in an untreated community sample of older adults*

To better understand the development and course of late-onset or recurrent alcohol problems, we plan to (1) conduct a 20-year follow-up of late-life problem and nonproblem drinkers; (2) identify precursors of late-life alcohol use disorders; (3) predict patterns of stable remission and relapse, and how different processes are linked to different resolutions (e.g., abstinence or nonproblem drinking); (4) focus on predictors and outcomes of help-seeking; (5) study the role of lifetime history of drinking in treatment-seeking and in sustained remission among older problem drinkers; and (6) examine the influence of long-term drinking patterns on morbidity, mortality, and depression (Brennan, Schutte, Moos).

Strategy 1.1D. Examine the value of self-help and mutual support groups as adjuncts and alternatives to formal SUD and psychiatric care

Initiative 1.1D1. Determine factors associated with entry into and dropout from self-help groups

To enhance the effectiveness of treatment and self-help groups, we will (1) identify reasons why initially untreated individuals with alcohol use disorders do not seek or drop out of self-help groups (Moos); (2) determine whether these reasons differ for women versus men, and for individuals with varying baseline severity (Moos); and (3) identify racial differences in participation and involvement in 12-step self-help groups (Moos, Loomis, Kelly).

Initiative 1.1D2. Identify effects of SUD self-help group participation

To better understand the effects of participation in SUD self-help groups, we will examine the (1) short- and long-term influence of the duration and intensity of participation in Alcoholics Anonymous (AA) on alcohol-related and psychosocial outcomes; (2) examine effects of relatively rapid versus delayed affiliation with AA on outcomes; (3) study the prevalence of participation in, the characteristics of participants, and the effectiveness of Nicotine Anonymous (Kelly); and (4) determine the effects of relapse to alcohol problems on (re)engagement in self-help groups (Moos, Timko).

Initiative 1.1D3. Examine the use of new communication technologies for delivering informal care

To assess technologically innovative self-help programs, we will (1) develop a standardized coding system to determine the quality of internet-based support groups; (2) evaluate on-line help group consumers' participation and utilization patterns; and (3) compare the characteristics of participants in on-line and face-to-face groups (Humphreys).

Initiative 1.1D4. Enhance involvement in self-help groups

Because of low rates of initial participation in self-help groups and high drop out, we will (1) recommend how clinicians can decrease the likelihood of dropout by screening for and addressing risk factors; (Kelly, Moos); and (2) examine the efficacy of different interventions to facilitate engagement in 12-step self-help groups (Timko, Kelly).

Strategy 1.1E. Compare the long-term course of treated and untreated substance use and psychiatric disorders

Initiative 1.1E1. Compare outcomes of alcohol use disorders among individuals who obtain treatment versus those who do not

Because estimates of SUD treatment effects depend on information about outcomes of individuals who remain untreated, we will (1) compare substance use, symptom, and functioning outcomes of treated and untreated individuals with alcohol use disorders (Timko); (2) identify risk factors for short- and long-term nonremission among individuals with alcohol use disorders; (Moos, Timko), (3) identify how gender differences in the duration of participation in professional treatment and self-help groups influence life context and coping factors over an 8-year period (Moos, Timko); (4) complete a 16-year follow-up of treated and untreated problem drinkers and compare determinants of remission in these groups (Moos); (5) identify effective combinations of formal and informal care over 16 years among initially untreated individuals with alcohol use disorders (Moos, Timko); and (5) identify the personal, life context, and treatment-related predictors of 16-year outcomes trajectories among initially untreated individuals with alcohol use disorders (Moos).

Initiative 1.1E2. Identify factors that influence the long-term course of treated and untreated depression

To better understand the personal and life context factors involved in long-term remission and relapse of unipolar depression, we will (1) estimate the extent to which personal and social resources, and professional treatment act as protective factors in preventing recurrent depressive episodes; (2) develop a risk factor index associated with a

high likelihood of experiencing a long-term chronic course of depression; (3) identify risk factors for the onset of depression in initially nondepressed individuals; (4) investigate the associations between unipolar depression and using alcohol to cope with stressors, and how life context vulnerabilities heighten the risk for using alcohol to cope; (5) determine whether stably remitted depressed patients attain normal patterns of functioning and life contexts, and identify functioning and life stressor deficits associated with chronic depressive episodes over a 10-year interval; (6) determine the association of physical health status and health behaviors (such as drinking, or exercise) with depression; and (7) evaluate the clinical utility of a coping model for the assessment and treatment of individuals from different ethnic groups (Cronkite, Moos, with Holahan and Chun).

Strategy 1.1F. Improve medical care for patients with psychiatric disorders and for trauma victims

Initiative 1.1F1. *Determine if diabetes-related medical care is comparable for patients with and without psychiatric disorders*

To determine the comparability of diabetes care for VA patients with and without psychiatric disorders, we will (1) use existing VA and Medicare database information and survey data to determine whether medical resource utilization varies by presence of psychiatric disorders in patients with diabetes; (2) examine whether differences in utilization translate into an association between presence of mental health conditions and poorer quality of care, after accounting for case mix; and (3) assess whether this association varies by specific psychiatric disorder or gender, and whether it persists after accounting for non-VA care (Frayne).

Initiative 1.1F2. *Determine if the experience of trauma among women veterans is associated with increased medical illnesses*

Given the prevalence of sexual assault and other traumas among women in the military and VA, we will determine the burden of medical illness, current physical symptoms, and health risk behaviors in a large sample of women with PTSD who are receiving VA care (Frayne).

Objective 1.2. Develop and apply new knowledge about clinical decisionmaking, screening, and diagnostic assessment

Strategy 1.2A. Identify cost-effective strategies for the prevention and treatment of HIV disease

Initiative 1.2A1. *Evaluate the health and economic benefits of potential antiretroviral therapies*

To evaluate alternative HIV/AIDS treatment approaches, we will (1) continue to develop a framework to assess potential benefits and costs of antiretroviral therapies; (2) continue work on the gains in quality-adjusted life expectancy required for antiretroviral therapies to be cost-effective; (3) determine the optimal management of patients with HIV for whom first- and second-line highly active antiretroviral therapy has failed (Owens); and (4) examine the cost-effectiveness of antiretroviral therapy in the elderly (Owens).

Initiative 1.2A2. *Evaluate the health and economic benefits of potential HIV screening and preventive interventions*

To evaluate HIV/AIDS screening and prevention approaches, we will (1) develop the scientific basis for a VA HIV screening guideline; (2) examine the cost-effectiveness of HIV screening; (3) assess the effectiveness and cost-effectiveness of interventions aimed at slowing the spread of HIV and drug abuse, and portfolios of prevention interventions; and (4) examine the relationship between policy modeling and public health decisions in HIV and substance abuse (Owens).

Strategy 1.2B. Identify effective strategies for improving the management of cardiovascular disorders

Initiative 1.2B1. *Evaluate interventions for improved management of hypertension*

To improve the management of hypertension, we will (1) evaluate a cutting-edge automated decision support system, ATHENA DSS, for disseminating hypertension guidelines using patient-specific advisories delivered to clinicians at point-of-care along with quarterly audit-feedback (Goldstein); and (2) participate in a multisite study to quantify and compare rates of angioderma in veterans using ACE inhibitors and other hypertensive drugs (Goldstein with Berlowitz).

Initiative 1.2B2. *Evaluate strategies to prevent sudden cardiac death*

To assist VA physicians in defining strategies to identify patients at high risk for sudden cardiac death and to treat ventricular arrhythmias, we will (1) further develop screening and treatment guidelines and a web-based decision support system for ventricular arrhythmia management; and (2) continue to evaluate the impact of decision support on physician decisionmaking (Owens).

Strategy 1.2C. Identify cost-effective screening and treatment strategies for cancer

Initiative 1.2C1. *Identify effective strategies for screening, staging, and treating lung cancer*

To improve lung cancer screening and management, we will (1) examine the cost-effectiveness of lung cancer screening with low-dose helical computed tomography by developing a model of the natural history of lung cancer and using decision analysis techniques to compare resource utilization and clinical outcomes in screened and unscreened at-risk populations(Gould, Owens); (2) evaluate the accuracy and cost-effectiveness of PET and other diagnostic tests in patients with solitary pulmonary nodules and for detecting regional lymph node staging in patients with known or suspected non-small cell lung cancer(Barnett, Gould, Owens); and (3) evaluate a computer-based decision support system for management of patients with solitary pulmonary nodules by conducting a “virtual” randomized trial of computer-based decision support versus traditional guidelines (Gould, Owens).

Initiative 1.2C2. *Determine the cost-effectiveness of screening for breast cancer*

To foster appropriate screening practices for breast cancer, we will conduct cost-effectiveness analyses of alternative methods for screening for this disease (Garber)

Strategy 1.2D. Improve screening for depression in primary and mental health care settings, and clinical decisionmaking for SUD patients

Initiative 1.2D1. *Determine relationship of patient and provider factors to adherence to guideline-concordant treatment of depression in primary care*

Building on our prior work indicating low adherence by both VA and non-VA primary care providers to depression clinical guidelines, we will use data from an experimental study to examine patient characteristics (e.g., gender, race, age) and provider characteristics (e.g., gender, specialty status, discomfort with uncertainty, fear of malpractice, gender sensitivity) to determine what factors explain depression practice guideline adherence (Frayne).

Initiative 1.2D2. *Develop a model decision support system for pharmacotherapeutic treatment of SUDs*

To integrate our previous work and bring about higher quality treatment for patients with SUDs, we will (1) develop a clinical decisionmaking model for the pharmacotherapeutic treatment of SUDs; and (2) develop a decision support system for providing tailored pharmacotherapeutic practice recommendations to clinicians treating patients with SUDs (Weingardt, Owens, Goldstein).

Objective 1.3. Develop and apply new knowledge about the organization and delivery of health care services

Strategy 1.3A. Identify how health care system factors, hospital organization, and market forces influence patients' demand for and the cost of care, and patient outcomes

Initiative 1.3A1. Specify the effect of travel distance and Medicare eligibility on the demand for VA care

To better understand how access issues influence the demand for VA care, we will (1) examine distance as a determinant of the demand for VA inpatient and for outpatient medical and mental health care, and compare the effect of distance on demand for care in those two settings; (2) examine the influence of non-VA alternatives on the relationship between distance and VA demand; and (3) assess whether the use of costly VA services is influenced by whether or not a patient is enrolled in Medicare (Phibbs).

Initiative 1.3A2. Examine the relationship between hospital organization and market forces as determinants of the cost of care

To provide information to help VA policymakers decide whether unused acute care beds should be closed or kept available in case of future demand, we will continue to analyze demand variability, excess capacity, and economies of scale as determinants of hospital costs (Phibbs).

Initiative 1.3A3. Conduct an international comparison of long-term care for patients with Alzheimer's disease and other dementias

Drawing on the 20-nation Global Healthcare Productivity project, we will (1) describe how the prevalence of Alzheimer's disease, related dementias, and associated disability are changing over time in the participating countries; (2) describe how care for individuals with severe Alzheimer's disease and other forms of dementia varies within and across the participating countries; and (3) infer from cross- and within-country variation how health care financing, organization, and public and private policies influence the patterns of care (Garber).

Initiative 1.3A4. Study trends in demography, economics, health, and health care, and the effects of these trends on the well-being of the elderly.

In collaboration with the Stanford Center on Demography and Economics of Health and Aging, we will (1) examine the effects of medical technology on costs, outcomes, and well-being of the elderly (Garber); (2) conduct longitudinal and cohort studies of medical care, costs, and health and economic outcomes in the U.S. and other countries (Garber); (3) study the economics of retirement and demographic change in an international population (Garber); in collaboration with the National Bureau of Economic Research, we will (4) continue to develop data resources for health care research on aging (Garber); (5) apply these data to better understand health care systems, the costs and benefits of treatments over time, and the implications for costs and outcomes of alternative approaches to health policy in caring for older veterans (Garber); and (6) use VA and Medicare data to develop disease-specific life tables for older persons diagnosed with colorectal or esophageal cancer (Garber and Vij).

Initiative 1.3A5. Evaluate end-of-life care by age, race, and geographic regions in the VA

To improve the quality of care at the end of life in VA, we will (1) compare medical treatments and costs during the last two years of life in various age and ethnic groups; (2) evaluate variations in costs and aggressiveness of medical treatments for terminal patients across VA medical centers; (3) analyze relationships between patients' and family members' preferences for medical care at the end of life and actual healthcare provision; and (4) examine the effects of patients' casemix, wage and price differences, production structure (e.g., number of beds per nurse), and DSS data accuracy on VA nursing care costs (Yu).

Initiative 1.3A6. Determine current models of service delivery for SUD patients in extended care and outcomes associated with different models

To identify models of service delivery, we will (1) survey VA long-term care administrators regarding the structure, organization and clinical challenges of their programs; (2) examine the associations between models of long-term care service delivery and SUD patients' use of health services following their admission to extended care; and (3) examine the impact of different models of organizing and delivering care to SUD patients in extended care, staff characteristics, and patient risk factors on patient outcomes (Lemke, Schaefer).

Strategy 1.3B. Implement and evaluate interventions to improve the efficiency and effectiveness of outpatient care

Initiative 1.3B1. Improve the management of cardiovascular disease, particularly chronic heart failure (CHF)

To improve the management of cardiovascular disease, we will (1) use EPRP and QUERI-CHF data to evaluate performance measures of quality of VA heart failure care, and examine use of beta-blockers in patients with heart failure and depressed ejection fraction (Heidenreich); (2) determine the best strategy to implement beta-blocker therapy in appropriate CHF patients (Heidenreich with Massie); (3) analyze the cost-effectiveness of the use of ACE inhibitors in early heart failure on morbidity; (4) analyze gender and racial differences in the treatment of heart disease; (5) compare administrative and clinical data in their ability to forecast mortality, evaluate processes of care and their relationship to outcome; (6) develop new methods to improve the assessment of the quality of health failure care; and (7) determine whether clinical reminders attached to echocardiography reports improve compliance with clinical guidelines for managing heart failure and cardiac valve disease (Heidenreich);

Initiative 1.3B2. Examine organizational factors in primary care clinics contributing to the management of patients with substance use disorders (SUDs)

To determine organizational features of primary care (PC) clinics associated with better management of patients with SUDs, we will (1) compare the facility- and clinic-level features of clinics reporting different treatment management styles (e.g., full, partial, and no management within the setting); and (2) evaluate the role of available SUD specialty services on the management style followed in PC clinics (Schutte in collaboration with the Sepulveda COE and SUD QUERI).

Initiative 1.3B3. Identify reasons for refusing intensive alcohol treatment and create viable lower intensity treatment options

To learn more about how to improve the delivery of outpatient SUD care, we will (1) identify reasons why patients refuse treatment and their preferences for less intensive treatments; (2) create new treatment options based on reported preferences and current research in order to increase access to VA alcohol treatment; (3) compare the costs of less intensive AUD interventions to those of traditional outpatient care; and (4) develop clinical pathways for identifying patients who do not improve in less intensive care and referring them to more traditional outpatient care (McKellar, Humphreys).

Initiative 1.3B4. Evaluate the organization of more and less intensive treatment for SUDs

To learn more about the optimal treatment intensity of SUD care, we will compare the process and outcome of different treatment models, such as intensive inpatient care, initial intensive outpatient care with a transition to less intensive outpatient care and back-up community residential care, initial acute inpatient care with a transition to community-based residential care, and regular outpatient care (Moos, Schaefer, Lemke).

Strategy 1.3C. Determine how staff members' knowledge and practices enhance the quality, safety, and outcome of care

Initiative 1.3C1. Evaluate guideline-concordant nursing interventions for pain management

To promote effective cancer pain management, we will evaluate the effectiveness of two nursing interventions, which both utilize AHRQ clinical practice guidelines, on satisfaction with pain management, functional status, and quality of life in veterans receiving cancer care in VA ambulatory care clinics (Douglas).

Initiative 1.3C2. *Evaluate guideline-concordant, online intervention for treating alcohol withdrawal in medical and surgical patients*

To determine whether training in guideline-concordant treatment enhances the quality of care for medical and surgical patients at risk of developing Alcohol Withdrawal Syndrome, we will evaluate the efficacy of using an online learning course, embedded within a larger organizational change intervention, to increase the number of VA nursing staff who regularly use an objective, empirically-validated measure to screen for withdrawal risk (Weingardt in collaboration with the SUD QUERI).

Initiative 1.3C3. *Examine the impact of organizational factors and staff fatigue on patient safety and preventable treatment errors*

To identify factors that promote patient safety, in collaboration with the Patient Safety Center of Inquiry, we will (1) determine the basis for fatigued behavior and lapses in psychomotor performance of emergency department physicians and nurses; (2) in collaboration with the Stanford Center for Health Policy (CHP) and the Naval Postgraduate School, survey a large sample of hospitals regarding safety culture; and (3) in collaboration with CHP, determine if safety changes are made in surveyed hospitals, and the relationship between safety culture and patient safety practices and outcomes (Gaba, Howard).

Initiative 1.3C4. *Examine whether educating staff about guideline-concordant care enhances patients' outcomes*

To determine whether training on guideline-concordant treatment enhances the quality of care for PTSD and dementia patients, we will (1) assess staff knowledge and treatment practices before and after educational interventions; (2) assess PTSD and dementia patients' symptoms and functioning at follow-up; and (3) examine associations between changes in staff practices and patient outcomes (Rosen, Finney with MIRECC staff).

Initiative 1.3C5. *Develop and evaluate interventions to enhance staff members' morale and effectiveness*

To improve the VA workplace and staff morale, we will (1) evaluate an intervention to help staff identify and change problems in the workplace (Rosen, Finney with MIRECC staff); (2) beta test in other VISN 21 facilities an intervention that gives hospital executives first-hand experience in clinical work environments with patient safety issues faced by workers and patients (Gaba, Howard); and (3) develop and evaluate a simulation model of medical workflow to assist in improving work processes and patient outcomes (Cain with Goldstein and Levitt).

Strategy 1.3D. Enhance VA organizational capacity to respond to bioterrorism

Initiative 1.3D1. *Contribute to VA organizational preparedness for bioterrorist events*

To help the VA prepare to respond to bioterrorism, we will prepare an evidence report that assesses whether aspects of bioterrorism preparedness (e.g., to deliver medical services) can be regionalized (Owens).

Initiative 1.3D2. *Contribute to VA detection of bioterrorist events*

In collaboration with Stanford Medical Informatics, we will develop information technology that can monitor VISTA data on disease activity, prescribing patterns, orders for laboratory tests and procedures, and other indirect signs to detect at the earliest stage possible abnormal patterns that could suggest an incipient epidemic in the VA patient population (Goldstein with Musen).

Objective 1.4. Develop new knowledge about health care research methodology

Strategy 1.4A. Develop reliable and valid measures of patients' health status and outcomes

Initiative 1.4A1. Refine and implement a computer-based method to assess patients' preferences about alternative states of health

To develop better methods to assess older adults' utilities for health states of dependency in the activities of daily living (ADLs), we will (1) further develop a utility elicitation tool, FLAIR2, designed specifically for older adults, to improve the measurement of quality of life changes resulting from the prevention or mitigation of functional limitations (Garber, Goldstein); and (2) develop computer programs for utility elicitation for patients with Gastroesophageal Reflux Disease or Barrett's Esophagitis (Goldstein).

Initiative 1.4A2. Develop measures of patients' decisionmaking processes when faced with stressful health care situations

To better understand patients' health care decisionmaking, we will (1) develop two versions of an inventory focused on decisionmaking processes about stressful situations that arise in health care (one dealing with situations with providers and one focusing on situations with health plan service representatives); and (2) identify patients' reactions to these situations and their influence on the process and outcome of care (Moos, with Fondacaro).

Initiative 1.4A3. Develop a screening instrument for substance use disorders in primary and psychiatric care

Because of a dearth of practical screening instruments for detecting substance use disorders other than tobacco use and excessive alcohol consumption, we will (1) develop a short substance use screener for primary care patients and determine its reliability and validity; and (2) develop a short screening instrument for use with psychiatric patients and evaluate its psychometric properties (Tiet).

Initiative 1.4A4. Estimate the outcome-based validity of information in VA health care utilization databases

To estimate the validity of process indicators of SUD program performance, we will examine the relationship between process indices currently used to assess program performance, such as the provision of outpatient mental health care, and patients' substance use and symptom outcomes (Finney, McKellar).

Initiative 1.4A5. Develop a system to reliably identify patients with mental health disorders seen in primary care

To develop a methodology that allows researchers to use administrative data sources to identify patients with mental health disorders that commonly present in primary care settings, we will assess the reliability of various candidate clusters of ICD9 codes (selected with Delphi panel input) when compared with self-reported mental illness symptoms, screening instrument results, and mental health utilization data (Frayne).

Strategy 1.4B. Develop reliable and valid measures of the characteristics of health care programs

Initiative 1.4B1. Develop and refine new indices of mental health treatment intensity and program structure

Because clinicians seek to match patients to appropriate levels of treatment intensity and program structure to enhance mental health outcomes, we will develop indices to assess intensity and structure, and establish norms for SUD and psychiatric programs on these indices (Timko).

Initiative 1.4B2. Refine a measure of SUD and psychiatric programs' treatment orientations

To assess the theoretical orientation of mental health treatment, we will (1) complete the development of the Drug and Alcohol Program Treatment Inventory and adapt it to apply to psychiatric programs; and (2) provide normative and psychometric data about the Inventory (Moos).

Strategy 1.4C. Formulate more efficient ways to develop and disseminate outcome-based practice guidelines

Initiative 1.4C1. *Formulate methods to generate annotated clinical algorithms*

To facilitate the generation of annotated clinical algorithms, we will (1) in collaboration with investigators at Ben Gurion University, develop web-based computer tools to support the rapid conversion of clinical practice guidelines into computable formats, and to support the review of electronic patient data for quality assessment (Goldstein, Owens); (2) develop a computer-based system that analyzes decision models and automatically creates algorithms; (3) extend this system to generate recommendations to prevent sudden cardiac death; and (4) evaluate the system with cardiology trainees (Owens).

Initiative 1.4C2. *Implement and evaluate methods to provide distributed decision support for the development of clinical guidelines*

To facilitate decision support for geographically dispersed users, we will design and build a web-based interface that enables remote users to modify and analyze decision models (Owens).

Strategy 1.4D Determine the limits on generalizability of findings due to the imposition of highly selective exclusion criteria.

Initiative 1.4D1. *Determine limits on generalizability in alcohol treatment trial findings due to commonly used exclusion criteria*

We will determine whether widely-used exclusion criteria in alcohol treatment studies over the past 30 years have created research samples that differ significantly from help-seeking samples on baseline characteristics and treatment outcomes (Humphreys)

Initiative 1.4D2. *Determine generalizability limits from exclusion criteria imposed in studies of the treatment of medical disorders*

We will (1) conduct a literature review of studies of the treatment of other chronic illnesses (e.g., epilepsy, depression, cardiovascular disease) to determine the exclusion criteria that have been imposed; and (2) gauge the limits on generalizabilitiy of findings that have resulted from these exclusion criteria (Humphreys).

Our other four goals are presented below. Given space limitations, the initiatives to meet each goal are listed in compressed form below each strategy. The CHCE staff member or members with primary responsibility for implementing each initiative also are indicated.

Goal 2. *Disseminate findings and apply research results to improve veterans' health care*

Objective 2.1. Provide consumers with information about research findings and clinical and policy applications

Strategy 2.1A. Develop and implement up-to-date methods of communication with a network of consumers

We will (1) maintain a nationwide mailing list with e-mail addresses of consumers, including network directors, clinical managers, and program directors and coordinators (Timko); (2) use the VA intranet and the internet (including

our enhanced website) to disseminate findings and applications described in peer-reviewed manuscripts and reports (staff); and (3) disseminate via e-mail and internet technical reports, manuals, and user's guides for new assessment procedures and health services research methods (staff).

Strategy 2.1B. Provide evidence-based policy recommendations to VA, other federal, and community leaders

We will (1) distribute reports with facility and Network data monitoring trends in VA SUD patients and programs, program performance, and program outcomes (Humphreys, McKellar); (2) provide e-mail, internet, and telephone-based responses to customer's requests for information about Center projects, findings, and policy recommendations (staff); and (3) work with staff of other federal agencies, such as the GAO, IG, and ONDCP, and congressional committees to enhance their knowledge of health services research findings and applications, and to contribute to evidence-based policies (staff).

Objective 2.2. Promote awareness of health services research findings and applications to the broader professional and lay community

Strategy 2.2A. Present findings and implications at seminars and professional meetings

We will describe research findings and clinical and policy applications at local and national health services and specialty medical and mental health conferences (staff).

Strategy 2.2B. Disseminate findings and describe clinical and policy applications in leading professional outlets

We will (1) publish findings, clinical applications, and policy recommendations in leading peer-reviewed health services, medical, and mental health journals and books (staff); (2) work with VA and affiliated university media outlets to disseminate findings and applications to the broader professional and lay community (staff); and (3) partner with foundations to summarize research findings in a readable, attractive format for distribution to clinicians, health care organizations, policymakers, and the media (Humphreys).

Objective 2.3. Translate research findings into clinical practice

Strategy 2.3A. Strengthen Center expertise on proven methods of dissemination and methods of changing clinician behavior

We will (1) obtain training in dissemination and change strategies for core staff; and (2) ensure expertise in dissemination and change strategies on our Steering Committee; and (3) maintain working liaisons with expert groups, such as the Veterans' Evidence-based Research, Dissemination and Implementation Center (VERDICT) (Finney).

Strategy 2.3B. Continue to be a nationwide focal point for synthesizing and disseminating information to VA practitioners about findings relevant to SUD treatment guidelines

We will (1) maintain a VA SUD practitioners' planning group to provide support for clinician education about guideline development, implementation, and evaluation (Finney with SUD QUERI); (2) survey clinicians to examine their knowledge and opinions about clinical guidelines for SUD treatment (Finney with SUD QUERI); (3) plan and organize nationwide conferences of VA SUD clinical coordinators to disseminate applications of new research findings (Finney with MHSHG and the CESATES); and (4) develop and maintain a collection of online resources that provide interactive, engaging information on empirically-validated treatment approaches (Weingardt).

Goal 3. *Provide technical expertise and guidance to national and local organizations and to individuals*

Objective 3.1. Provide expert information and guidance to VA Central Office

Strategy 3.1A. Help HSR&D Service and Office of Research and Development plan and maintain an outstanding research program

We will (1) review research proposals and help investigators plan and implement new research projects (staff); and (2) provide leadership and guidance for key health services research and Central Office initiatives (staff).

Strategy 3.1B. Furnish expert information and guidance to other VACO Offices and Networks

We will (1) provide expert consultation to the Mental Health Strategic Healthcare Group (Humphreys, Finney, McKellar, Schutte); and (2) promote collaborative liaison with Network Directors and Clinical Managers (Finney, Goldstein).

Objective 3.2. Provide expert information and guidance to VA at the local and Network levels

Strategy 3.2A. Furnish expert advice to the Sierra Pacific Network, the VA Palo Alto HCS, and other VA facilities in the Network

We will (1) assist investigators in planning and developing fundable proposals and publishable manuscripts (Cronkite and staff); (2) contribute to Network advisory groups (Barnett, Goldstein, Moos, Owens); and (3) furnish oversight and guidance of VA-based and VA affiliated research programs (Finney, Garber, Goldstein, Moos, Owens).

Objective 3.3. Improve the quality and clinical applications of work conducted by the health services research community and enhance awareness of health services research in the broader professional community

Strategy 3.3A. Enhance the quality of funded health services research projects

We will (1) conduct expert reviews for federal and private granting agencies (staff); and (2) serve development and oversight functions for national research institutes (staff).

Strategy 3.3B. Improve the quality of health services research and other professional journals, and contribute to the advancement of health services research as a discipline

We will (1) serve on editorial boards and as peer reviewers for leading health services and other journals; (2) provide expertise on assessment procedures and program evaluation and cost-effectiveness analysis methods; and (3) provide leadership to professional societies by becoming active members and officers (staff).

Goal 4. *Provide high quality health services research and informatics training*

Objective 4.1. Link outstanding mentors and fellows with educational resources

Strategy 4.1A. Maintain a cadre of VA health services research and medical informatics mentors and match them with promising postdoctoral candidates

We will (1) maintain a pool of experienced researchers committed to being exemplary mentors (Cronkite and staff); and (2) recruit highly trained and promising candidates for postdoctoral training (Cronkite and staff).

Strategy 4.1B. Provide access to unique resources for trainees to conduct VA-relevant health services and medical informatics research

We will offer fellows opportunities to collaborate in the formulation of new and innovative projects, and to work with archival databases, especially VA patient and administrative databases (mentors).

Strategy 4.1C. Provide fellows access to high quality educational resources and mentoring in formulating and conducting research

We will (1) provide fellows with a range of didactic opportunities (staff); and (2) enable fellows to develop expertise in formulating research projects, conducting statistical analyses, writing manuscripts, and reviewing manuscripts and grant proposals (mentors).

Objective 4.2. Expand training and career opportunities

Strategy 4.2A. Increase the diversity and integration of VA and affiliated university postdoctoral training activities

We will (1) participate in efforts to generate new VA and affiliated University training activities (Cronkite and staff); and (2) offer opportunities for integrated, interdisciplinary research and training activities (Cronkite and staff).

Strategy 4.2B. Provide opportunities for fellows to obtain VA-funded research positions

We will (1) maintain a referral network to enhance fellows' chances of finding VA employment (Cronkite, Garber, Owens, and staff); and (2) enhance fellows' awareness of the resources and opportunities associated with pursuing VA careers (staff).

Goal 5. *Evaluate and improve the Center's activities and enhance Center staff professional development and expertise*

Objective 5.1. Obtain and incorporate feedback from internal reviews and consumers on goal performance

Strategy 5.1A. Conduct timely internal performance reviews and evaluate progress toward specified goals

We will (1) monitor the Center's conduct of health services research with respect to established milestones; (2) monitor the Center's efforts to disseminate and apply research findings; (3) monitor the Center's provision of expert information and guidance (Timko, Finney); and (4) monitor the Center's provision of health services research and informatics training (Cronkite, Finney)

Strategy 5.1B. Obtain feedback from users of Center services and products nationwide

We will (1) obtain fellows' feedback about the postdoctoral training programs and about fellows' career paths (Finney); (2) use regular consumer feedback forms to obtain VA users' opinions about the value of Center reports (staff); and (3) collate external reviews of Center performance and discuss with Steering Committee (Timko).

Objective 5.2. Evaluate staff members' performance and promote staff development

Strategy 5.2A. Establish and review performance criteria for individual staff members

We will (1) develop and update performance criteria for each staff member (Finney); and (2) evaluate progress toward performance goals with each staff member on an annual basis (Finney).

Strategy 5.2B. Enhance staff members' professional expertise and advancement

We will (1) establish and maintain an ongoing system of internal peer review of manuscripts (Finney and senior staff); (2) identify emerging areas of research interest and funding and co-authorship opportunities (Finney and senior staff); and (3) obtain promotions and academic affiliations where indicated and feasible (Finney, Garber, Owens).

The performance schedules for our initiatives are given below. The performance schedules for Goal 1, Objectives 1-4, project the FY in which an activity, or a report or manuscript, on each specified component of the initiative first will be completed. Thus, for Objective 1, Strategy 1A, Initiative 1A1, we expect the single component of this initiative to result in a report in each year of the planning period.

Goal 1, Objective 1: Improve Process and Outcome of Treatment for Substance Use and Psychiatric Disorders

Strategy 1A Characterize VA SUD/psychiatric patients and programs		FY04	FY05	FY06	FY07	FY08
1A1.	Monitor trends in VA SUD patients' characteristics and care	1	1	1	1	1
1A2.	Monitor performance of VA specialized SUD treatment programs	1,2,3	3	3	1,3	3
1A3.	Monitor changing standards of care for patients w/ psychiatric disorders	1	2,3			
1A4.	Establish practical system to monitor SUD patients' outcomes and care	1,2,3	4	5		
Strategy 1B Conduct outcome evaluations of major SUD/psychiatric treatments						
1B1.	Conduct reviews of SUD treatment outcome literature	1,2	3			
1B2.	Identify cost-effective regimens of outpatient SUD care		1,2,3			
1B3.	Identify cost-effective treatments for opiate-dependent patients	1,2	3	4		3
1B4.	Examine associations between SUD COC practices and outcomes	1,2	3,4			
Strategy 1C Identify characteristics of care associated w/ better outcomes among high-risk/underserved patients						
1C1.	Evaluate tailoring treatment for patients with both SUDs and psychiatric disorders	1,2				
1C2.	Evaluate guideline concordant care for patients with both SUDs and psychiatric disorders	1,3	1,2,3	2,3	3	3
1C3.	Identify correlates of PTSD and mediators of PTSD's effects		1,2	3		
1C4.	Examine role of personal, life context and coping factors in drinking problem relapse and recovery among older adults	1	2			
1C5.	Determine prevalence/characteristics of pts w/ SUDs in extended care	1,2	3	3		
1C6.	Identify treatment services of better outcomes for older pts w/ SUDs	1,2,3	4			
1C7.	Examine development of late-life alcohol use disorders and factors associated with remission and relapse			1,2	3-6	

Strategy 1D Examine value of self-help groups as adjuncts/alternatives to formal SUD and psychiatric care	FY04	FY05	FY06	FY07	FY08
1D1. Determine factors associated w/ self-help group entry and dropout	1	2,3			
1D2. Identify effects of SUD self-help group participation	1,2		3,4		
1D3. Examine use of new communication technologies to deliver informal care	1		2,3		
1D4. Enhance involvement in self-help groups	1	2	2		
Strategy 1E Compare long-term course of treated/untreated SUDs and psychiatric disorders					
1E1. Compare outcomes of AUDs among individuals who do/do not obtain treat	1	2,3,4	5,6		
1E2. Identify factors influencing long-term course of treated/untreated depression	1	2,3	4,5	6,7	
Strategy 1F Improve medical care for pts w/ psychiatric disorders and for trauma victims					
1F1. Determine comparability of diabetes-related medical care for patients with and without psychiatric disorders	1	2,3		2	3
1F2. Determine if trauma among women veterans is associated with increased medical illness		1			

Goal 1, Objective 2: Develop/Apply New Knowledge About Clinical Decisionmaking, Screening, & Diagnostic Assessment

Strategy 2A Identify cost-effective strategies for prevention and treatment of HIV disease	FY04	FY05	FY06	FY07	FY08
2A1. Evaluate health and economic benefits of potential antiretroviral therapies				1,2,3	4
2A2. Evaluate health and economic benefits of potential HIV screening/preventive interventions	1,2	3,4	3,4	3,4	3,4
Strategy 2B Identify effective strategies to manage cardiovascular disorders					
2B1. Evaluate interventions for improved hypertension management		1	2		
2B2. Evaluate strategies to prevent sudden cardiac death	1	2			
Strategy 2C Identify cost-effective screening and treatment strategies for cancer					
2C1. Identify effective strategies for screening, staging, and treating lung cancer	2		1	3	
2C2. Determine cost-effectiveness of breast cancer screening			1	1	
Strategy 2D Improve screening for depression in primary/medical care, and clinical decisionmaking for SUD patients					

		FY04	FY05	FY06	FY07	FY08
2D1.	Determine relationship of patient/provider factors to adherence to guideline- concordant treatment of depression in PC		1			
2D2.	Develop a model decision support system for pharmacologic treatment of SUDs		1		2	2

Goal 1, Objective 3: Develop and Apply New Knowledge About the Organization and Delivery of Health Care Services

Strategy 1.3A Identify how health care system factors, hospital organization, and market forces affect demand for and cost of care, and pt outcomes		FY04	FY05	FY06	FY07	FY08
3A1.	Determine effect of travel distance and Medicare eligibility on demand for VA care		1,2,3	2,3		
3A2.	Examine relationship between hospital organization and market forces as determinants of cost of care	1				
3A3.	Conduct international comparison of long-term care for dementia pts	1	1	2	2,3	3
3A4.	Study trends in demography, economics, health, and health care, and their effects on well-being of elderly	1,4	2,5	3	6	6
3A5.	Evaluate end-of-life care by age, race, and geographic region in VA		1,2		3,4	
3A6.	Determine current models of service delivery of SUD patients in extended care and outcome associated w/ different models		1,2	2,3	3	3
Strategy 1.3B Implement/evaluate interventions to improve outpatient care efficiency/effectiveness						
3B1.	Improve management of cardiovascular disease, particularly CHF	1,2,3,4	5	6,7		
3B2.	Examine organizational factors in PC clinics contributing to management of patients w/ SUDs		1,2	1,2		
3B3.	Identify reasons for refusing intensive alcohol treatment and create viable lower intensity treatment options		1			2,3,4
3B4.	Evaluate organization of more and less intensive treat. for SUDs		1	1		
Strategy 1.3C Determine how staff members' knowledge and practices enhance quality, safety, and outcome of care						
3C1.	Evaluate guideline concordant nursing interventions for pain	1				
3C2.	Evaluate a guideline concordant, online intervention for treating alcohol withdrawal			1		
3C3.	Examine impact of organizational factors/staff fatigue on pt safety	1	2	2,3	2	2,3
3C4.	Examine whether educating staff re guideline-concordant care enhances outcomes	1	2	3		
3C5.	Develop/evaluate interventions to enhance staff morale/effectiveness	1,2,3	1	1	1	1

Strategy 1.3D Enhance VA organizational capacity to respond to bioterrorism		FY04	FY05	FY06	FY07	FY08
3D1.	Contribute to VA organizational preparedness for bioterrorist events	1				
3D2.	Contribute to VA detection of bioterrorist events	1				

Goal 1, Objective 4: Develop New Knowledge About Heath Care Research Methodology

Strategy 1.4A Develop reliable/valid measures of pt health status and outcomes		FY04	FY05	FY06	FY07	FY08
4A1.	Refine/implement computer-based method to assess pt preferences	1		2		
4A2.	Develop measures of patient decisionmaking processes		1			2
4A3.	Develop screening instruments for detecting SUD in PC and psychiatric care		1,2			
4A4.	Estimate outcome-based validity of information in VA utilization databases	1				
4A5.	Develop system to use VA patient database information to reliably identify pts with mental health disorders seen in primary care	1				
Strategy 1.4B Develop reliable/valid measures of health care program characteristics						
4B1.	Develop/refine indices of MH treatment intensity & program structure	1				
4B2.	Refine a measure of SUD and psychiatric programs' treatment orientations	1	2			
Strategy 1.4C Formulate efficient ways to develop/disseminate practice guidelines						
4C1.	Formulate methods to generate annotated clinical algorithms		1,2	3,4		
4C2.	Implement/evaluate distributed decision support methods for development of clinical guidelines	1				
Strategy 1.4D Determine limits on generalizability imposed by highly selective exclusion criteria						
4D1.	Determine limits on generalizability in alcohol treatment trials		1			
4D2.	Determine limits on generalizability in studies of treatments for medical disorders		1	2		

The Strategies and Initiatives to implement Goals 2 through 5 are ongoing (i.e., implemented each fiscal year).