Improving VA Services for Substance Use Disorder Patients: Conducting Policy-Relevant Program Evaluation

Program Evaluation and Resource Center

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Note: This document was prepared by the senior staff of the Program Evaluation and Resource Center with the support of the VA Mental Health Strategic Healthcare Group.

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Overview

The Program Evaluation and Resource Center (PERC) was created by The Department of Veterans Affairs (VA) in 1990 to conduct congressionally-mandated evaluations of services for VA patients who have substance use disorders and related comorbidities. PERC is organized under the auspices of the Mental Health Strategic Health Group (MHSHG) in VA Central Office and is physically located at the VA Health Care System in Palo Alto, California. Its primary academic affiliation is with Stanford University School of Medicine

PERC's three major, inter-related goals are to (1) Support the efforts of the VA and its federal partners to provide high-quality, integrated health care services for veterans who have substance use disorders; (2) Improve the effectiveness and cost-effectiveness of interventions for substance use disorders, and (3) Improve policies and practice guidelines affecting interventions for substance use disorders.

PERC pursues these goals by conducting state-of-the-art monitoring and evaluation studies of interventions for substance use disorders. These projects are focused in five major areas: (1) The nationwide status of substance use disorder patients and services in the VA; (2) The process and outcome of specialty substance use disorder treatment programs; (3) Psychiatric, geriatric and chronic pain-related issues that complicate the treatment of substance use disorders; (4) Self-care interventions and peer mutual-help organizations for substance use disorders, and (5) Substance use disorder-related policies and practice guidelines. PERC disseminates the results and implications of its evaluations in these areas, which contributes to the VA's effort to care for the millions of veterans who have substance use disorders.

Mission

PERC uses evaluation science to promote more effective services and policies for substance use disorders. For the past 14 years, PERC has substantially contributed to the development of an integrated body of knowledge about substance use disorders and their treatment that has helped the VA implement a coordinated system of substance abuse care. To facilitate the VA's strategic objectives, all PERC activities fulfill one or more of the following three inter-related goals:

- **Support the efforts of the VA and its federal partners to provide high-quality, integrated services for veterans who have substance use disorders**. Because of their prevalence and severity, substance use disorders are a major concern of the VA health care system. Accordingly, the VA operates a national network of 250 specialty substance abuse treatment programs. The VA's efforts to supply high-quality services for substance use disorders are supported by the U.S. Congress, which has mandated that VA substance use disorder treatment capacity be maintained, and by The White House Office of National Drug Control Policy, which is the lead agency for President Bush's initiative to expand drug treatment services. To support these efforts by the VA and its federal partners, PERC describes**,** monitors, and forecasts changes in VA health care services for patients who have substance use disorders. PERC regularly provides assessments for the VA and its stakeholders of the system's accessibility, continuity of care, treatment capacity, and program implementation.
- **Improve the effectiveness and cost-effectiveness of interventions for substance use disorders.** Veterans, VA managers, and the public understandably want VA services to be as effective and cost-effective as possible. PERC conducts evaluations of substance abuse treatment programs that focus on treatment process, environment, staffing, costs and outcomes. Understanding how these variables interact to predict successful outcomes allows PERC to make concrete recommendations for program improvement. Because they are effective and may reduce the cost of formal care, PERC's evaluations encompass self-care interventions and peer mutual help organizations for substance use disorders. PERC outcome evaluations include special attention to psychiatric, geriatric and chronic pain-related issues that commonly co-occur with substance use disorders and can complicate treatment. PERC findings on how to improve treatment are disseminated widely to VA clinicians and program managers. These findings have also provided the basis of treatment improvement studies conducted by the VA QUERI substance abuse coordinating center, with which PERC is closely affiliated.
- **Improve policies and practice guidelines affecting interventions for substance use disorders.** The policy environment inevitably affects the quality, cost, accessibility and outcomes of services for substance use disorders. This environment includes clinical practice guidelines for how care is provided, rules set by program managers on the organization of treatment settings,

and national policies about substance abuse treatment (e.g., Congressionally-initiated funding programs). To better inform the development of policies, PERC evaluates how clinical practice guidelines, program-level procedures and national policies affect the VA's national system of substance abuse programs. PERC disseminates the results of its policy evaluations to clinical service managers, facility directors, chiefs of staff, and MHSHG officials. Either through MHSHG or directly, PERC also disseminates its findings to the White House Office of National Drug Control Policy, the Government Accounting Office, The National Institutes of Health, the Office of the Inspector General, The Substance Abuse and Mental Health Services Administration and the Senate and House Veterans' Affairs committees. PERC also consults as requested on the policy development efforts of VA entities such as The Office of Quality and Performance, The National Mental Health Improvement Plan, The Deputy Undersecretary's Mental Health Commission, and clinical practice guideline development workgroups.

Major areas of focus

1. Systemwide monitoring of VA patients who have substance use disorders

National survey data indicate that rates of substance abuse among the nation's veterans are as high or higher than they are among male non-veterans (SAMHSA, 2001; 2002). Substance use disorders are also prevalent among those veterans who receive health care from the VA. VA patients who have substance use disorders receive care in medical/surgical units and in psychiatry services, as well as in specialty substance abuse treatment programs that focus exclusively on addicted patients. PERC monitors substance use disorder services and patients in both non-specialty and specialty settings, as described below.

1.A. Monitoring substance use disorder patients and services

Background

PERC studies have indicated that substance use disorders are prevalent within all types of VA health care settings. For example, 21% of inpatients (75,800 veterans) and 43% of extended care (28,200) patients discharged from the VA in FY02 had a substance use disorder diagnosis. That same year, 10% of outpatients (444,057) had a substance use disorder diagnosis. PERC has a number of projects dedicated to tracking changes in this large population of patients across the VA health care system and determining their impact and needs.

Projects and Findings

The data above were derived from an annual PERC report that describes the changing characteristics and patterns of health care utilization for VA patients with substance use disorders , regardless of whether they receive care in a specialty or non-specialty setting (McKellar, Lie, & Humphreys, 2003). Each report compares data from the current fiscal year with that of prior years. The report provides important information on the severity of problems among VA patients, as for example, in FY02 15% of outpatients and over 40% of inpatient and extended care patients who had a substance use disorder diagnosis also had a comorbid psychiatric diagnosis. The FY02 report also noted dramatic changes in the VA system. The total number of unique VA patients with a substance use disorder increased 13% between FY01 and FY02 (from 429,032 to 485,092) and increased 53% from FY98 (316,500). However the number of diagnosed substance use disorder patients receiving some specialized substance abuse care decreased by 8% between FY01 and FY02 (from 99,533 to 92,037) and decreased 35% since FY98 when 142,200 received specialized care. When considering the proportion of diagnosed patients receiving some specialty services, changes were even more striking. Whereas 19% of diagnosed

substance abuse patients received specialized care in FY02, 23% received such care in FY01 and 45% did in FY98 (McKellar and Lie, 2003). Such data are of concern because other PERC evaluations suggest that when veterans with substance use disorders are not treated in specialty settings, they instead may receive care in more costly medical and psychiatric units (Humphreys, Baisden, Moos, & Piette, 1997).

A related annual project conducted by PERC calculates the total annual costs of VA medical care provided to patients with illicit drug-related diagnosis (i.e., excluding tobacco and alcohol use disorders). These data are used by the White House Office of National Drug Control Policy to develop the annual national drug control budget. This project's results parallel those just described, namely that the drug disorder patients are receiving less specialty substance abuse treatment but more non-speciality health care in the VA.

Two other PERC projects in this area are closely linked. As a part of the ongoing effort to ensure that the care for substance use disorder patients meets a consistent level of high quality across all medical services and facilities, the VA Mental Health Strategic Healthcare Group has identified seven indicators of performance related to substance use disorder patients. These indicators assess treatment capacity, access to specialty substance use disorder services, and continuity of care. PERC has calculated these performance indicators and reported on them within the VA since 1996. More recently, Congress adopted several of the indicators as treatment capacity measures in The Department of Veterans Affairs Health Care Programs Enhancement Act of 2001, mandating further annual reporting by PERC. PERC performance indicator reports to date indicate that although national numbers for the seven indicators have remained relatively constant since 1996, there is a high degree of variability in outcome on both the program level and on the VISN level. Closer evaluation of high performing programs may yield important insights into improving access and continuity of care nationwide (McKellar, Lie, & Humphreys, 2003).

Two new projects focusing on the treatment of SUD patients in non-specialized treatment settings such as primary care clinics and psychiatry programs were initiated at the beginning of FY04. These projects are in response to recent trends (discussed above) indicating that the number of SUD patients in non-specialty care settings is increasing. Since FY98, the number of SUD outpatients seen in non-specialized care settings has more than doubled (McKellar, Lie & Humphreys, 2003). To evaluate the impact of these trends, PERC is surveying primary care physicians throughout the VA to ascertain the number and type of substance abuse treatment services that are currently being delivered to SUD patients in these settings. In parallel fashion, PERC is surveying psychiatry staff throughout the VA to determine the number and type of treatment services that are delivered through the psychiatry service. These two studies will be completed and their results disseminated by the end of FY 04.

Implications and Future Directions

The impact of substance use disorders on veterans and the VA goes far beyond what happens in specialty substance abuse treatment programs. The increasing number of veterans identified as having a SUD is likely due to the enhanced awareness of substance use disorders in primary care settings and increased accessibility spawned by outpatient satellite clinics. Increased identification may not be relating to increased treatment because of contraction in the number of specialty treatment programs available to these patients (Humphreys & Horst, 2001). Future PERC evaluations will investigate how the growing number of substance use disorder patients affects medical and psychiatric services, the VA system as a whole, and the quality of care for substance use disorders being provided to veterans.

1.B. Monitoring specialty substance use disorder treatment program implementation and access

Background

As described above, veterans with substance use disorders extensively access all VA health care settings. The PERC projects described here focus on VA programs that specialize in treating substance use disorders. In order to provide substance dependent veterans with appropriate medical care, it is necessary to match treatment availability to veterans' needs and ensure that VA programs are accessible and implemented as intended. PERC has a long history of monitoring specialty program implementation, beginning in 1990 when the U.S. Congress and the White House Office on National Drug Control Policy directed $90 million in recurring funds to enhance VA's specialty substance abuse treatment programs. PERC's oversight effort contributed to the success of this enhancement program: 152 of 159 VA facilities were able to fully or almost fully implement their enhancement programs. (Moos, Swindle, Peterson, & Greenbaum, 1991; Swindle, Peterson, Greenbaum & Moos, 1992; Swindle, Greenbaum & Moos, 1993; Greenbaum, Swindle, & Moos, 1994). As described below, PERC is continuing its efforts to monitor specialty substance use disorder treatment programs in the VA.

Current Projects and Findings

PERC is responsible for monitoring the implementation of VA substance abuse programs recently funded by Congress in The Veterans Millennium Healthcare Act of 2000. This Law appropriated about $9.4 million for starting new specialty substance use disorder treatment programs and for expanding services at existing programs. PERC closely tracked the funding and implementation of these programs, enabling MHSHG to assure that the monies were received and used appropriately. PERC followed the hiring of staff, the use of funding, acquisition of space, and program development. PERC identified programs having difficulties and worked with MHSHG to resolve problems as they were encountered. At the end of the Millennium Act funding period (2003), over 85% of all staff positions were filled and directed toward

substance abuse programming. An additional 5,350 patients were treated in FY02 as a result of the expanded services. PERC will continue to monitor and facilitate the progress made in actualizing these system-wide enhancements to the VA's specialty substance use disorder treatment system.

PERC's other, major, ongoing responsibility in this area is a triennial survey of every specialty substance use disorder treatment program in the VA system. The survey helps policy makers track changes in the nature of care provided to veterans with substance abuse disorders. Survey results also help clinicians and program managers to understand clinical practice norms in the VA system. At the end of FY00, the VA operated 246 substance use disorder treatment programs, including 20 inpatient programs, 65 residential programs, 73 intensive outpatient programs, and 85 standard outpatient programs. The number of residential programs tripled over the 1990s, but this was not sufficient to replace the number of beds lost when 90% of inpatient programs closed between FY94 and FY00 (Humphreys & Horst, 2001; 2002). Other data from the survey indicates an overall decline in availability of specialty substance use disorder treatment services. The total number of intensive and standard outpatient programs (n=158) at the end of FY00 was 10% lower than the 176 programs identified at the end of FY97. System contraction is also evident in staffing data, which showed that the full-time equivalent number of substance use disorder treatment staff in FY00 (2471) was about 50% of its mid-1990s peak. Treatment providers also report that half of their patient caseloads in FY00 were dually-diagnosed (substance use disorder and psychiatric disorder) compared to about one-third of caseloads in FY91. Thus, while the number of specialty substance use disorder programs is decreasing, the level of complexity of patients treated is increasing (Humphreys & Horst, 2001). The next program survey was initiated September 30, 2003. It will gather further important information about the status of the VA's substance abuse treatment system.

Implications and Future Directions

The VA's large, complex system of specialty substance use disorder treatment programs cannot be adequately managed or improved without information on its current status and historical trends. PERC's active monitoring of the implementation of new programs ensures that planned improvements in specialty services are realized. PERC's series of nationwide "snapshots" of VA substance use disorder services and patients also alerts policy makers and program managers to developing challenges that must be addressed. In this era of rapid change in the VA, it is especially important to monitor changes in VA substance abuse services because apparent cost savings derived by reducing specialty services may be offset by rising costs in other areas of the health care system.

2. Substance use disorder treatment outcomes evaluation

VA clinicians employ many different modalities of SUD treatment, which vary extensively in the type, amount, and intensity of the services delivered. In addition, the VA clinicians delivering SUD care

and the therapeutic milieu of programs in which they work vary greatly in many aspects. Thus, to enhance the effectiveness of the VA substance abuse treatment system, it is essential to identify which treatment activities and environments contribute to improvement among patients, and whether such improvement differs across patient subgroups. PERC's program evaluations illuminate the multiply determined processes occurring during and after formal substance abuse treatment. PERC projects look inside the "black box" of treatment, and identify the patient, staff, treatment environment, and extra-treatment variables that predict successful patient outcomes. This section describes PERC's evaluation initiatives in five major areas: (A) Supporting national system of routine outcomes monitoring, (B) The comparative impact of widely-employed treatment modalities, (C) Continuity of care practices, (D) Community residential facilities, and (E) Opiate substitution programs.

2. A. Supporting a national system of routine outcomes monitoring

Background

In 1997, VA began a nationwide outcomes monitoring program requiring that clinicians administer the Addiction Severity Index (ASI) to all patients with a substance use disorder diagnosis, whether they obtained specialized substance abuse care or primary psychiatric or medical care. Clinicians have been required to administer the ASI upon admission to a program, and again 6 to 12 months after discharge. Baseline and follow-up ASI data are then compared on a yearly basis to measure improvement in such areas as substance abuse, psychiatric and medical problems, and family/social, legal, and employment problems.

PERC is responsible for analyzing and reporting the results of the ASI outcomes monitoring system (e.g. Moos, Finney, Cannon, Finkelstein, McNicholas, McLellan, & Suchinsky, 1998; Moos, Federman, Finney & Suchinsky, 1999; Moos, Finney, & Suchinsky, 2000; Otillingam, Ritscher, Finney, Moos & Suchinsky, 2002; Poon, Weingardt & Humphreys, 2003). PERC staff are also responsible for the collection of ASI follow-up data via mailed surveys as a means of augmenting follow-up interviews performed by VA clinicians.

Projects and Findings

Each Fiscal Year since 1997, PERC staff has identified a new cohort of unique SUD patients to monitor. The size of these cohorts depends on the number of ASIs that have been performed throughout the system and has ranged from 67,279 unique patients in FY 1998 to 10,600 unique patients in FY 2002. In general, the results of this monitoring effort indicate that VA SUD treatment is effective in reducing alcohol and other drug use and to a lesser extent, related physical, psychological, legal, and social problems. Treatment is also associated with increased employment and health care cost reductions (Otilingham, et

al. 2002; Ouimette et al, 1997; Ritsher, Moos & Finney, 2002; Humphreys, et al., 1996; Humphreys & Moos, 2001). VA treatment is responsible for these improved outcomes despite treating a more severely impaired SUD treatment population than does the private sector (Ottilingham, Ritsher, Finney, Moos & Suchinsky, 2002),

In addition to documenting the effectiveness of specialized treatment programs, PERC staff analyze nationwide VA health care utilization databases to examine the diagnoses, inpatient and extended care, and outpatient mental health services patients received during their index episode of care. These analyses document that about three quarters of VA SUD patients have both alcohol and drug dependence diagnoses, and about two-thirds have co-occurring psychiatric diagnoses (Poon et al., 2003). Furthermore, PERC analyses have consistently found that SUD patients receive a substantial amount of VA care within their specialized treatment episode, and for long afterward (Poon, et al, 2003).

Implications and Future Directions

Much of the impetus behind the system-wide ASI monitoring effort described above has come from the VA Office of Quality and Performance (OQP), which established the ASI as a performance measure in 1997. Because performance measures are the metric by which Veterans Integrated Service Network (VISN) directors are evaluated, they typically receive substantial administrative support at the facility level. However, effective November 2002, OQP has dropped the ASI as a performance measure. Without this administrative imprimatur, the labor-intensive process of assessing every VA SUD patient with the ASI will probably become increasingly less viable.

Fortunately, investigators affiliated with PERC, John Finney and Quyen Tiet, are evaluating the feasibility of an alternate outcomes monitoring process whereby a representative sample of VA SUD patients is identified and assessed at baseline and follow-up with an abbreviated ASI. The preliminary results suggest this approach can obtain representative follow-up data due to a much higher follow-up rate. For the first of the three annual data collection cycles, Finney & Tiet achieved a follow-up rate of 67%, a major improvement over the follow-up rate of the mandated VA SUD monitoring system, which did not exceed 45% even when combined with the augmented follow-ups conducted by a survey research firm. PERC staff is closely following the findings of this outcomes monitoring project and will work to translate its findings into policy recommendations for the Mental Health Strategic Health Group and our other stakeholders.

PERC will continue to evaluate the ASI data that is collected by clinicians throughout VA, and will publish a report in FY04 comparing the baseline characteristics of veterans who have been treated in FY03 to those treated in previous years.

2. B. The comparative impact of widely-employed treatment modalities

Background

Substance abuse treatment in the United States tends to be delivered from two major theoretical perspectives. In "12-step " treatment, strong emphasis is placed on the idea that substance use is an disease that can arrested but never cured through abstinence and through moral/spiritual growth. "Cognitive-behavioral" treatment programs in contrast view substance use as a learned behavioral habit than can be brought under control using empirically derived intervention techniques. Assessing whether either or both treatment approaches are effective, and for whom, is a major task of substance use disorder program evaluation.

Projects and Findings

PERC conducted one of the largest studies ever of VA substance use disorder treatment. Data were gathered from over 3,000 veterans entering cognitive-behavioral, 12-step and mixed orientation substance use disorder programs. In this multi-site study, patients from 15 VA facilities provided data at baseline, treatment discharge, one-year, two-year, and five-year follow-up. Major findings were that substance use and related problems declined dramatically during and after treatment. The different treatment modalities were of comparable effectiveness, except that 12-step treatment was superior at promoting complete abstinence.

Over 30 sub-studies of this multi-site project have yielded other important insights about substance use disorder treatment. Among other findings, these projects have revealed that relationships among treatment staff affect program atmosphere and the level of support among patients, that 12-step treatment may enhance the benefit of community mutual help group participation more than does cognitive-behavioral treatment, and that effective treatment restructures patients' long-term social networks to support lasting reductions in drug and alcohol use. Aftercare participation was a potent predictor of long-term outcomes, with 12-step peer mutual help group participation producing somewhat stronger effects than outpatient continuing care attendance (Ritsher, Finney & Moos, 2002; Ritsher, McKellar, Finney & Moos, 2002). Interestingly, those with a dual diagnosis appear as likely to attend 12 step group meetings, and dual diagnosis patients appear to obtain similar benefits from 12-step group attendance as those without a dual diagnosis (Kelly, McKellar, Moos 2003; McKellar, Stewart & Humphreys, 2003).

A recent PERC project identified functional factors related to SUD recovery at two year and five year follow up. Across program orientations, patients who develop skills to cope with negative affect in a

flexible, non-avoidant manner show markedly better long term outcomes. Supportive programs with involved staff and abstinence-supportive social networks contribute to the development and maintenance of these skills (Ouimette, Moos & Finney, 1998; Ritscher, Finney & Moos, 2002)

A new project at PERC involves assessing interest in less intensive treatment options for individuals who refuse referral to intensive forms of SUD treatment (e.g., intensive outpatient). In addition, the study will assess these individual's perceived barriers to treatment entry. The goal of the study is to increase utilization of SUD treatment by lowering barriers to treatment entry and attending to patients' treatment preferences.

Other PERC projects focus on the substance that results in more mortality and morbidity than all illicit substances combined: tobacco. PERC investigators are developing and testing stochastic process models of the temporal pattern of cravings and reactions to cravings in transcribed texts of intensive smoking cessation treatment in order to develop a methodology for characterizing and quantifying time-dependent behaviors critical to successful smoking cessation treatment. This work is important because the presence of residual cravings or withdrawal symptoms in pharmacological treatment can lead to treatment failure, and individual's reactions to these internal stimuli are a primary target of adjunctive psychosocial treatments. The underlying mechanisms of craving may be common to other substance abuse treatment programs, and the modeling methodology could find applications in other settings where the time evolution of craving is key to the understanding of treatment process and outcome.

Recent behavioral therapies attempt to implement functional processes that have been linked to recovery across widely employed treatment modalities. PERC investigators are evaluating a new acceptance based treatment for smoking that draws from 12-step, cognitive behavioral, and medical management modalities. This treatment combines pharmacological treatments such as bupropion, which reduce cravings and withdrawal symptoms, with psychosocial treatments focused on acceptance based skills, which help patients cope with residual symptoms and negative affect.

Despite widespread availability of free Quitlines and scarce resources for counseling, few health care organizations refer patients to Quitlines for smoking cessation. PERC investigators are also testing the effectiveness of a Telephone Care Coordination Program (TCCP) for smoking cessation, whose objective was to increase referrals to the state Quitline and to provide smoking cessation medication management for GMC patients.

Implications and Future Directions

PERC's outcome evaluations frequently use naturalistic designs with little if any exclusion criteria, which provides estimates of treatment effects that are representative of those obtained in real-world programs with patients typically seen in everyday practice. Given that most active, well-delivered SUD treatments substantially improve patient outcomes, PERC plans to specify and test more accurate theoretical models of how change occurs over time in patients suffering from SUDs. These projects will move beyond assessing whether treatment works to determining for whom it works and why. PERC aims to determine the extent to which patient level (e.g. addiction severity, psychiatric comorbidity), staff level (e.g. therapeutic alliance, level of training and experience), treatment-level (e.g. pacing, duration and intensity) and extra-treatment social level (e.g. level of substance use among friends/family) factors help explain clinical course and outcomes. Simultaneous consideration of these relevant factors will maximize the usefulness of PERC evaluations to VA care providers.

2.C. Continuity of care practices

Background

The Institute of Medicine's (1990) recommendations for substance use disorder treatment identify continuity of care as a critical element in high quality programs. In 2003, the VA designated continuity of care as one of the performance measures of quality in its SUD treatment programs. Other recent developments in the VA reinforce the importance of continuity in the care for patients with SUDs. The proportion of VA substance use disorder patients with a concomitant psychiatric diagnosis and poor social stability has increased in recent years (Humphreys, Huebsch & Moos, 1998). Compared to patients in the private sector, VA SUD patients have more problems associated with their drug and alcohol use, especially psychiatric, medical, legal and employment problems (Moos, Finney, Cannon, Finkelstein, McNicolas, McLellan & Suchinsky, 1998). These clinically complex patients require comprehensive services that are coordinated among multiple health care and social service providers. Moreover, the VA's increasing emphasis on outpatient care (Piette, Baidsen & Moos, 1998) and the variety of levels of outpatient SUD treatment from which patients may receive services, accentuate the need for coordination during transitions between levels of care.

Projects and Findings

For all of the above reasons, it is important to have valid and reliable measures of continuity of care that program managers and evaluators can use to assess SUD programs and to determine the impact of continuity of care practice variations on patients' engagement in continuing care and treatment outcomes.

Two nationwide PERC treatment evaluations demonstrated that VA substance use disorder patients who received continuing care of more extended duration were more likely to be abstinent from alcohol and drugs, to have fewer substance use-related problems, and to have lower arrest rates at a 1-year follow-up (Ouimette, Moos & Finney, 1998; Moos, 1998). These data show the importance of obtaining more information about the clinical practices that contribute to patients' engagement in continuing outpatient care.

PERC is currently analyzing a unique, new dataset on continuity of care practices in collaboration with the VA QUERI substance use disorder coordinating center. A survey of 129 VA intensive substance use disorder treatment programs provided data on program-level continuity of care practices including staff efforts to ensure provider continuity, maintain contact with patients over time, coordinate care among providers, and connect patients to community resources. The dataset also includes prospective Addiction Severity Index data (baseline and 4-month follow-up) from 878 SUD patients treated in 28 intensive SUD programs that vary in continuity of care practices. PERC has also obtained data on the amount and type of treatment these patients received, their motivation for continuing care, and the specific continuity of care services that staff provided to each of these patients during intensive SUD treatment.

In collaboration with VA QUERI investigators, PERC will use these data to: (1) develop a reliable and valid measure of continuity of care, (2) determine the patient and SUD program factors that are related to the continuity of care services that patients receive, and (3) examine the patient and program factors and the continuity of care services that predict patients' engagement in continuing care, symptoms, and functioning 4 months after treatment. PERC will also collaborate with VA Health Economics Resource Center staff to determine whether SUD programs that provide more continuity of care services have higher costs than those that provide less continuity of care services.

Implications and Future Directions

Program managers can use the continuity of care survey instrument to compare and contrast programs' continuity of care practices, to identify programs that need to improve their performance, to provide feedback to staff about their clinical practices, and to monitor changes in programs' practices and improvements in quality of care.

Importantly, findings from the prospective studies of continuity of care practices' impact on VA patients' engagement in continuing care, their symptoms and their functioning will inform clinicians, managers, and policymakers about the impact of continuity of care practices on treatment outcomes. The cost study will provide the first VA data on the impact of continuity of care practices on SUD program costs.

In the ongoing triennial program survey (described in section 1.B), PERC will obtain data on continuity of care practices. PERC will use these data to (1) describe intensive SUD programs' current practices with regard to coordination of care and provider continuity, (2) examine variations in continuity of care practices by type of program, (3) specify areas where there is most room for improvement in practices, and (4) identify SUD program factors that are related to staff's continuity of care practices.

PERC will also work with non-VA providers to disseminate these findings. For example, PERC investigators are evaluating the use of process improvement techniques to improve access and retention in SUD treatment organizations in conjunction with SAMHSA's Strengthening Treatment Access and Retention and Robert Wood Johnson's Paths to Recovery program.

2.D. Community residential facilities

Background

The VA dramatically reduced its number of inpatient specialized treatment beds over the 1990s. PERC analysis of the substance use disorder treatment literature indicated that many patients do not require inpatient care (Moos & Finney, 1996). However, because many veterans who have substance use disorders live far from VA facilities, are homeless, or have disordered daily lives, attending regular outpatient treatment sessions is difficult for them. Lower-cost residential substance use disorder treatment programs may be an appropriate alternative for such patients. The VA operates many such facilities, and has contracted for services with others, but their effectiveness requires evaluation.

Projects and Findings

PERC is evaluating the characteristics of community residential facilities (CRFs), identifying the most effective types of facilities, and the kinds of patients who benefit most from such community treatment. More than 2,800 patients in 88 community residential facilities nationwide were enrolled in this prospective longitudinal study, and about 80% of these patients were followed after 1-year (Moos, Schaefer, Andrassy & Moos, 2001; Moos, Finney & Moos, 2000).

Level of participation in CRF treatment was independently associated with such discharge outcomes as completion of the program and moving into a stable residence. In addition, participation in treatment tended to counteract the negative effects of high-risk patient characteristics on outcome. These findings indicate that clinicians should work to enhance patients' motivation to participate and remain in treatment with established motivational enhancement techniques such as by adopting a motivational interviewing

style, setting limited goals to enhance the likelihood of success, and facilitating the development of patient-generated goals for change.

In a second study of the CRF sample, a more directed treatment orientation, a longer episode of community care, and completion of care were independently related to better 1-year outcomes. These findings held for patients with only substance use disorders and for patients with both substance use and psychiatric disorders (Timko, Lesar, Calvi & Moos, 2003). As an increasingly important locus of specialized care, community residential facilities need to develop and maintain more differentiated and distinctive treatment orientations.

Finally, a nationwide sample of 249 CRFs contracted to provide services to VA patients was surveyed twice three years apart (Timko, Lesar, Engelbrekt & Moos, 2000). At the second assessment, facilities were more likely to have psychiatrists and psychologists available to patients, as well as specialized counseling and psycho-educational, rehabilitation, and medical services. Facilities also provided more social and recreational activities, and were more structured. In addition, facilities were more likely to admit patients with both substance use and psychiatric disorders. These results indicate that CRFs that contract with VA are responding appropriately to an increasingly ill patient population by providing more services and structure.

Implications and Future Directions

The above results indicate that CRFs are a viable, lower cost treatment services for veterans with substance use disorders, including those that have a co-morbid psychiatric diagnosis. Expansion of CRFs may be an excellent way for the VA to compensate for its closure of most inpatient substance use disorder treatment programs.

2.E. Opiate substitution programs

Background

Opioid substitution has been used to treat heroin dependence for over 30 years. Opiate substitution therapy (e.g., methadone maintenance) sharply reduces the use of heroin and other drugs when clinical guidelines concerning dosage, availability of supportive psychosocial services, and treatment goals are closely followed (McLellan, Arndt, Metzger, Woody & O'Brien, 1993; Brown, Watters, & Inglehart, 1982). However, previous PERC studies suggest that VA methadone clinics (Hamilton & Humphreys, 1996; Humphreys, Hamilton & Moos, 1996), like non-VA clinics (D'Aunno & Vaughn, 1992) vary significantly in their policies and goals, and often engage in treatment practices that may not benefit patients. Little is

known about the extent of this variability in clinical practice or its influence on the performance of VA opiate substitution clinics.

Projects and Findings

PERC regularly surveys VA opiate substitution programs on their policies, treatment procedures, dosage practices, staffing, and use of psychosocial services (Hamilton & Humphreys, 1996). Survey data reveal considerable variability among the clinics in terms of size, services offered and clinical practices. These surveys provided much needed information on the current state of VA opioid substitution treatment, highlighting the scarcity of available programs, the high capacity at which all programs have been running, and the diversity of clinical practice among clinics.

Based upon the data from the surveys, a quasi-experimental study was developed by PERC in collaboration with the QUERI substance abuse coordinating center. The project is called the Multisite Opioid Substitution Treatment Study, i.e. "MOST" Study. The MOST study is comparing clinical outcomes and health care costs for opiate-dependent patients from 4 VA clinics that closely follow practice guidelines for dosing and psychosocial services to those in 4 VA clinics with less guideline concordant care. This study recruited over 250 patients and is continuing 12 month follow-up interviews.

Preliminary 6-month outcomes demonstrate that although patients in all clinics significantly reduce substance use, legal and employment problems, patients in clinics that closely adhere to clinical practice guidelines have better overall drug outcomes and less heroin use at follow-up. Patients attending clinics with high versus low adherence to guidelines did not differ in alcohol and cocaine use or in medical, legal, employment and family problems. Nevertheless, patients in clinics with high guideline adherence reported fewer psychological problems, greater treatment satisfaction and better health-related quality of life. Most importantly, close adherence to clinical practice guidelines for opioid substitution treatment is associated with better clinical outcomes in heroin dependent patients six month after treatment entry. The MOST study will complete 12 month follow-up and compare clinical and cost-effectiveness of clinical practice guideline adherence in the upcoming months.

Implications and Future directions

By providing concrete data on the clinical and cost consequences of various treatment practices, the MOST study should help to optimize treatment at new and current opioid substitution clinics. The findings will identify specific policies that impede or enhance clinic performance and will be used to establish performance-based program monitors. With the aid of the QUERI substance abuse coordinating center, results from this study will be used to guide interventions to improve VA care of opioid dependent patients.

3. Psychiatric, geriatric, and chronic pain-related issues that complicate treatment of substance use disorders

Substance use is rarely the only challenge experienced by substance dependent veterans. An increasing number of substance use disorder patients experience psychiatric comorbidities such as PTSD, depression, or psychotic spectrum disorders (Ouimette, Gima, Finney, & Moos, 1999). Others are already relying on the VA for nursing home care and other services for older veterans. Still others have chronic pain disorders than are intertwined with their substance use. To improve care for such complex patients, PERC is conducting many studies of substance use disorder patients who have psychiatric, geriatric, and chronic pain-related issues.

3.A. Co-morbid disorders: depression and PTSD

Background

Many VA substance use disorder patients have co-morbid psychiatric disorders (Moos, Finney, Cannon, Finkelstein, McNicholas, McLellan & Suchinsky, 1998; Moos, Federman, Finney, & Suchinsky, 1999). These include affective disorders such as major depression, and post-traumatic stress disorder (PTSD). Evaluations are sorely needed to determine how these co-morbid psychiatric disorders affect outcome, care utilization patterns, and treatment planning for patients with substance use disorders.

Projects and Findings

Several substudies of PERC's multisite evaluation project described earlier focused on those participants who were dually-diagnosed (Moggi, Ouimette, Finney, & Moos, 1999; Moggi, Ouimette, Moos, & Finney, 1999). In general, these studies found that as a group, dual diagnosis patients had similar substance use outcomes but worse psychiatric outcomes relative to SUD-only patients at the one-year followup. Those dual-diagnosis patients who were treated in a "dual diagnosis environment" and who attended peer mutual help groups were more likely to improve their coping skills and to have better substance use and psychiatric outcomes at the one-year follow-up (Kelly, McKellar, Moos 2003).

Substance abuse and depressive disorders frequently co-occur, often resulting in relapse, suicidal behavior, lack of treatment compliance, and increased probability of hospitalization (American Psychiatric Association, 1993; American Society of Addiction Medicine, 1996; SAMHSA – CSAT, 1994; American Psychiatric Association, 1995; Helzer & Pryzbeck, 1988; Greenfield, Weiss, Muenz, Bagge, Kelly, Bellow & Michael, 1998; Pages, Russo, Roy-Byrne, Ries & Cowley, 1997). PERC staff were involved in the development of clinical practice guidelines that address treatment for this dually-diagnosed population.

Guidelines suggest that both psychosocial services and medication should be used to treat depression in patients with alcoholism. Using the Austin central VA database, PERC is estimating the extent to which current VA practices adhere to this basic guideline. PERC is also in the process of merging data from the Austin central administrative database with the VA's Pharmacy Benefits Management database to assess the extent and type of treatment that this population receives for both alcohol dependence and depression.

Other PERC projects focus upon patients with PTSD, a disorder of great concern to the VA. These studies found that PTSD patients received less initial benefit from treatment (Ouimette, Ahrens, et al., 1998), and tended to have poorer one-year outcomes than other dually-diagnosed patients or than SUD-only patients (Ouimette, Ahrens, et al., 1997). Furthermore, they continued to have a less favorable course at the 2-year follow-up (Ouimette, Finney, & Moos, 1999). PTSD patients were just as likely to use 12-step self-help groups as SUD-only patients, but this did not offset their poorer prognosis over the 2-year follow-up period. Patients who received PTSD treatment in the first three months following discharge and those who received treatment for a longer duration in year 1 were more likely to be in remission from SUD in Year 5 (Ouimette, Moos & Finney, 2003).

In a separate project, PERC is examining the impact of a VA residential rehabilitation treatment for PTSD on the violent behaviors and thoughts of substance use disorder patients completing the program. Data are being obtained at admission, discharge and 4-month follow-up. Analysis will include examining the correlation of demographic variables and co-morbidities with treatment outcomes. This study should inform the VA as to whether treatment can reduce violence among substance use disorder patients, which would be a major benefit to patients and to society.

Implications and Future Directions

The above studies point to the severe problems experienced by dually-diagnosed veterans, and raise the question of whether their needs are adequately addressed in specialty treatment programs. PERC is conducting a naturalistic, quasi-experimental study to examine the combinations of system, treatment, clinician, and patient factors associated with better outcomes among dually-diagnosed patients. Over 200 dual-diagnosis and 200 single-diagnosis patients (comparison group) will be sampled from substance abuse specialty, psychiatric specialty and dual diagnosis treatment programs and followed up 6 months later. Costs and utilization of care will be tracked along with clinical outcomes, enabling PERC to make recommendations as to which combination of treatment factors is most promising.

3.B. Substance use disorders among geriatric patients

Background

Vietnam-Era veterans who have substance use disorders are increasingly developing chronic health conditions that require nursing home care at a "young old" age. Over the next decade, many Vietnam-era veterans with SUDs will need VA nursing home care. Unfortunately, we know little about the health care service utilization of this challenging clinical population. Nor do we have a good understanding of the number and characteristics of "older old" veterans with substance use disorders referred for addictions treatment during nursing home care or the models of care that are most effective for them.

Projects and Findings

SUDs are one of the most commonly occurring mental health diagnoses in VA nursing homes, but almost no evaluations have focused on this nursing home population. PERC data show that older patients with SUDs have better substance use and psychosocial outcomes than do younger patients (Brennan, Nichol, & Moos, in press) Older patients are well-integrated into mixed-age inpatient treatment programs, and receive comparable or better treatment than younger or middle-aged patients (Lemke & Moos, 2002). However, we do not know the extent to which older SUD patients are well-integrated into other treatment settings, particularly long-term care. This information is important to VA policymakers and managers because the cohort of aging Vietnam-era veterans with SUDs are now starting to use nursing home care.

PERC conducted in-depth interviews with clinical experts in nursing home care and found that the first wave of Vietnam-era veterans are beginning to seek VA nursing home care. Staff view this group of patients as problematic and quite distinct from current long-term care patients. A number of these "young" old Vietnam veterans with SUD have PTSD and/or other psychiatric disorders in addition to complex medical and behavioral problems, which tax staff resources.

In order to gain a better understanding of the prevalence of SUD in VA nursing homes and the comorbidities of VA nursing home patients with and without SUD, PERC analyzed data from a random sample of 8,031 VA nursing home patients treated in FY02. Approximately 17% of these patients had a SUD diagnosis. Fewer than half the patients with a recent SUD diagnosis had this diagnosis recorded during their VA nursing home stay. SUD prevalence was higher among patients under age 65 (36%) than among patients over age 65 (11%) and SUD patients were more likely than are non-SUD patients to have

certain medical problems (e.g., respiratory, digestive disorders, injuries/poisonings) and psychiatric comorbidities (e.g., affective disorders, PTSD).

Implications and Future Directions

PERC staff used data from the above-described interviews and database analyses to formulate a new HSR&D IIR grant application. The proposal aims to identify (1) special health care problems that SUD patients pose for VA nursing homes, (2) ways in which VA nursing homes are responding to these patients, (3) special burdens of caring for SUD patients in nursing homes (health care utilization, costs and outcomes), and (4) the relationships of nursing home program characteristics with SUD patients' health care utilization, costs, and outcomes. Secondary analysis of VA administrative databases and data from a survey of VA nursing home directors will be used to address these objectives. VA administrative databases will be used to describe the population of patients treated in VA nursing homes and to test whether SUD patients present more clinical problems, use more health care services and at higher costs, or have poorer outcomes compared with non-SUD patients.

Project results will provide VA managers and clinicians with comprehensive information about the population of SUD patients in VA nursing homes, their treatment challenges and impacts, and the strategies and models of care nursing homes are using to meet their needs. Managers and policymakers can use these data to plan for and allocate resources that will be required to address the needs of this SUD patient population and to improve program effectiveness. This project will lay the groundwork for a future intervention study to evaluate alternative models of care for their comparative effectiveness and costs for SUD patients in nursing homes.

3.C. Chronic pain

Background

Chronic pain conditions are prevalent in the VA patient population as a whole (Clark, 2002). The incidence of chronic pain may be even higher in VA patients with substance use disorders, and these conditions may interact to influence disease course.

Current Projects and Findings

Chronic pain conditions are known to produce drug-seeking behavior in laboratory animals (Kupers & Gybels, 1995) and similar pain-induced narcotic seeking has been observed clinically in patients (Weissman & Haddox, 1989). The impact of chronic pain conditions on substance abuse outcomes is unknown and few evaluations have addressed appropriate treatment for patients with co-morbid chronic

pain and substance use disorders

PERC found that in heroin-dependent patients entering opioid substitution treatment pain problems were associated with on-going abuse of pain-relieving drugs such as illicitly-obtained opioid medications, sedatives and marijuana (Trafton et al., in press). Patients entering SUD treatment with pain problems had more severe medical and psychiatric problems and made more visits to primary care physicians and SUD counselors in their first months of treatment. Treatments that reduce pain may not only improve patients quality of life and productivity, but might also improve SUD treatment outcomes by eliminating a powerful motivation for drug use.

Long-term treatment with opioids, such as is recommended for treatment of heroin dependence, is associated with hypersensitivity to cold stimuli. It has been hypothesized that this opioid-induced hyperalgesia exacerbates chronic pain problems in patients given long-term opioid therapy. PERC examined whether opioid-induced cold hyperalgesia was associated with increased pain problems in patients in methadone maintenance treatment. Patients in methadone maintenance treatment were hyper-responsive to pain in the cold-pressor test as compared with patients in drug-free SUD treatment for abuse of non-opioid substances, however, hyperalgesia in the cold-pressor test was not related to severity or prevalence of pain problems in either patient population (Trafton and Minkel, under review). Instead, severity and prevalence of pain problems were associated with inadequate sleep in these SUD populations. This suggests that long-term opioid therapy does not worsen on-going pain problems in SUD patients.

Implications and Future Directions

Chronic pain is a highly disabling and common condition among VA substance abuse patients. Notably, chronic pain is thought to contribute to continued substance use and does not necessarily improve during treatment in VA programs for substance abuse. By determining better treatments for this co-morbid condition, PERC may help improve substance use treatment outcomes and reduce disability among a significant population of veterans.

4. Self-care interventions and peer mutual help organizations

PERC devotes major attention to self-care interventions and peer mutual help organizations for substance use disorders for four important reasons. First, addiction and related disorders all have a significant behavioral component and thus require active engagement in change on the part of the sufferer. Second, some patients may feel less stigmatized by being able to access resources that do not bring them in direct contact with individuals not sharing the condition. Third, self-care interventions and peer mutual help organizations involve little or no professional staff time, making them inexpensive to

provide. Fourth, when professional treatment program make use of or link patients to mutual help groups and self-care interventions, an enduring support for change over time is established that can extend the benefits of treatment.

4.A. Internet-based self-care for substance use disorders

Background

Veterans seeking health information and self-care interventions are increasingly accessing the Internet and the World Wide Web. In collaboration with the QUERI substance abuse coordinating center, PERC has for several years made extensive use of the Internet to disseminate evaluation findings and to provide on-line courses for clinicians who treat substance use disorders. More recently, PERC has begun assessing the potential of the Internet to provide empirically-supported self-care interventions to veterans.

Projects and Findings

Two PERC studies have investigated how the Internet might be used to promote self-care for alcohol use disorders. The first found that problem drinkers were more likely to prefer an Internet-based intervention to a face-to-face intervention if they were female, under age 35, and had severe alcohol problems (Humphreys & Klaw, 2001). In a separate study done in collaboration with the Center on Addiction and Mental Health, a world wide web-based self-assessment was created to allow individuals to privately enter data on their own alcohol consumption and to receive feedback. Results indicated significant utilization of the page by women, perhaps because of the greater stigma they face concerning help-seeking for alcohol problems (Cunningham, Humphreys, & Koski-Jannes, 2000). Currently, a project is underway that will extend this approach beyond alcohol, and will employ a web application to provide visitors with personalized, normative feedback regarding their use of substances other than alcohol. Prototype modules providing feedback on cannabis and tobacco use are currently undergoing pilot testing, and will soon be followed by modules focused on use of cocaine, amphetamines and opiates. In addition to normative feedback, this web-based application will also provide visitors with self-help materials to enable them to reduce, or eliminate, their substance use.

Implications and Future Directions

Internet-based self-care interventions are a new area of health care about which little is known. PERC's initial evaluations indicate that veterans with substance use disorders will access such interventions. Further, such interventions seem particularly appealing to women, a population the VA is making greater

efforts to serve. Future work in this area will focus on further increasing the appeal of such self-care interventions, and evaluating their outcomes and costs relative to other interventions.

4.B. The effectiveness of peer mutual help organizations

Background

Peer mutual help organizations such as Alcoholics Anonymous, Cocaine Anonymous and SMART Recovery are a major resource for addressing substance use disorders. Indeed, U.S. adults make more visits to mutual help organizations for substance use and psychiatric problems than they do to all professionals combined (Kessler et al., 1997). Popularity does not of course prove effectiveness, so PERC rigorously assesses the effectiveness of mutual help organizations in as many of its studies of substance use disorders and related co-morbidities as possible.

Projects and Findings

The main findings of PERC's multisite study of different treatment modalities and of community residential facilities have been described earlier. Importantly, both of these studies also found that in-treatment and post-treatment participation in Alcoholics Anonymous and similar mutual help organizations was a strong predictor of long-term abstinence and improved psychosocial functioning. These general results held across a variety of subpopulations of VA patients, and over multiple follow-up intervals.

PERC conducted a separate study examining the potential contribution of peer mutual help organizations to individuals who had serious mental illness as well as a substance use disorder. In collaboration with the Alcohol Research Group, PERC investigators evaluated the effectiveness of a crisis residential facility staffed by individuals who themselves were in recovery from substance dependence and/or serious psychiatric problems. Individuals facing civil commitment were randomly assigned either to the peer-managed residential facility or to a traditional locked inpatient psychiatric unit. Despite the severity of problems among the patient population, most of whom were dually-diagnosed and all of whom were in severe crisis at intake, improvements in clinical and life functioning outcomes did not differ significantly across treatment conditions at 1-year follow-up (Greenfield, Stoneking, Sundby, Bond & Humphreys, under review). Further, treatment satisfaction was significantly greater in the peer-managed program.

A third PERC study in this area evaluated how peer mutual help organizations could increase their accessibility, particularly to low-income people of color. The project used media public service announcements and educational materials to increase participation in mutual help groups for substance use disorders, psychiatric disorders and other chronic health problems. These promotional materials were designed by a culturally diverse coalition of mutual help group leaders and were distributed through

health clinics, social service agencies, radio stations, and public transportation systems (e.g., as bus posters). Relative to a control city, the two California cities receiving the media and education intervention experienced significant increases in the number of English- and Spanish-language enquiries about mutual help groups to information and referral agencies, and, had a higher number of individuals attending mutual help groups at project sites. Public education campaigns thus appear to be a cost-effective method of increasingly the accessibility of an important source of support for chronically ill individuals (Humphreys, Macus, Stewart and Oliva, under review).

Because no health intervention is effective and appealing to all people who have chronic illnesses, PERC is also evaluating the experiences of substance abusing individuals who dislike 12-step peer mutual help groups like Alcoholics Anonymous. PERC staff are conducting qualitative interviews with 50 substance dependent veterans who either refused to attend self-help groups or did so at one point and then dropped out. The results of this ongoing study will help advise clinicians on how to anticipate difficulties with referrals to AA and other self-help groups

Finally, PERC completed a study of whether VA clinicians are making maximally effective use of self-help groups by referring substance use disorder patients to them during and after treatment. A PERC survey of all 328 VA substance abuse program managers found that most made frequent referrals to mutual help groups. However, they also reported less willingness to refer atheists, presumably because they assumed that such individuals would not feel comfortable with the spiritual aspects of groups like Alcoholics Anonymous (Humphreys, 1997). A second study indicated this practice is not supported by data. In a study of over 3,000 VA patients, clinicians were less likely to refer atheists and agnostics to 12-step groups, but when they did, such patients were just as likely to follow through on the referral and to begin attendance. Further, such individuals derived just as much benefit from attendance as did religious patients, indicating that current practice may be undermining outcomes for some non-religious patients in the false belief that they would not be helped by 12-step mutual help groups (Winzelberg & Humphreys, 1999).

Implications and Future Directions

PERC is recognized within and without the VA as a national leader in evaluating the benefits of peer mutual help organizations. Demonstrating that a free, widely-available intervention can help some veterans who have substance use disorders has clear health care policy importance. PERC plans to expand its work in this area by identifying the most effective ways for clinicians to facilitate mutual help group involvement.

4.C. Health care cost-offsets of facilitating mutual help group involvement

Background

Several evaluation projects have demonstrated that clinicians can influence whether their substance use disorder patients become affiliated with peer mutual help groups (Humphreys, 1999). This raises the important possibility that if clinicians better link patients to mutual help groups, will patients rely on groups for support over time and thereby reduce their use of VA health care services? If such a transition to the mutual help group sector could be accomplished without adversely affecting patient outcomes, it would represent a major cost-saving opportunity for the VA.

Projects and Findings

Two PERC studies provided strong evidence that peer mutual help groups can lessen the costs of caring for substance use disorder patients. In a one-year follow-up study, the outcomes of 887 substance dependent veterans treated in inpatient programs that strongly emphasized the importance of 12-step mutual help group involvement were compared with those of 887 veterans treated in inpatient substance use disorder programs that had no such emphasis. At treatment intake, the two groups of patients were comparable on treatment history, alcohol and drug problems, psychiatric problems, demographic variables, and motivation to change. At follow-up, those veterans who were encouraged to join peer mutual help groups were significantly more likely to be abstaining from drugs and alcohol. Further, these patients also relied more on mutual help groups and less on further VA mental health services for support after discharge, reducing their health care costs by almost $5000 per patient per year (Humphreys & Moos, 2001). A second study of a different sample of patients had similar findings over a 3-year period (Humphreys & Moos, 1996). These studies suggest that if all VA programs made effective efforts to link substance use disorders patients to mutual help groups, patient outcomes would improve and the VA would save millions of dollars in health care costs each year.

The next logical step after the above naturalistic studies was to determine whether a health care cost offset could be identified in a randomized clinical trial. In collaboration with the VA HSR&D Center for Health Care Evaluation, PERC is now conducting such a project with 450 substance use disorder patients across two VA health care systems. Half of the patients are being randomly assigned to an intensive mutual help group referral during treatment; all participants' substance use and cost outcomes will be assessed at one-year follow-up. This study will have the added benefit of testing a package of specific mutual help group referral procedures (e.g., linking patients to an experienced group member) that VA clinicians will be able to apply in everyday practice.

Implications and Future Directions

PERC was the first evaluation center to demonstrate a health care cost-offset to peer mutual help organizations for substance use disorder patients. Its findings in this area provide a concrete method for increasing the cost-effectiveness of treatment both within the VA and without. In the future, PERC will work closely with the QUERI substance abuse coordinating center to roll out practical mutual help group referral strategies to frontline VA clinicians and program managers.

5. Policies and practice guidelines regarding substance use disorder treatment

All treatments occur in a policy context that can enhance or detract from the success of care. Such policies include federal laws and initiatives, medical center rules, and policies within individual treatment programs. The policy environment also comprises clinical practice guidelines, which are intended to distill the best evaluation science into practical strategies for treating substance use disorders. PERC is involved in consultation and evaluation for all of the above aspects of the policy world.

5.A. Consulting on the development of scientifically-informed policies and practice guidelines.

Background

PERC is frequently asked by policy developing bodies to provide consultation about treatment findings, the VA's experience with substance use disorder treatment or both. PERC takes advantage of these opportunities to improve policy with scientific information.

Projects and Findings

PERC coordinated with SAMHSA a national workgroup of experts on substance abuse mutual help organizations who developed policy proposals for increasing the strength, utilization, and availability of drug and alcohol related mutual help groups. The document on policies related to substance use disorder mutual help groups was completed and distributed by the VA and SAMHSA in February 2003. It provides clinicians, program managers, and state and federal policy makers with strategies for increasing the positive impact of the mutual help group sector on individuals who have substance use disorders. PERC staff also participated in the federal partner meetings with SAMHSA for its report to Congress on the treatment of dual-diagnosed patients, and have advised SAMHSA on its current "Access to Recovery" initiative. PERC also has extensive contact with the White House Office of National Drug Control Policy (ONDCP). Projects with ONDCP include calculating and forecasting a budget for VA substance abuse treatment services and developing white papers on optimal approaches to drug abuse treatment and to early intervention.

Within the VA, PERC is participating in the formulation of the National Mental Health Improvement Plan and in the development of indicators conducted by the Office of Quality and Performance. PERC is also participating in the Deputy Undersecretary's Mental Health Commision and providing data regularly to the VA Committee on the Care of the Seriously Mentally Ill. PERC staff also participate actively in VA clinical practice guideline development groups, including those for opiate substitution treatment, alcohol withdrawal management, and co-morbid alcohol dependence and depression.

Implications and Future Directions

In the near future, PERC plans to collaborate with members of the QUERI substance abuse coordinating center to improve the VA/Department of Defense guidelines for treatment substance use disorders. PERC will also work with SAMHSA's Washington Circle Group to develop performance indicators for comparing the quality of VA and non-VA care.

5.B. Evaluating national policies related to substance use disorders

Background

The Congress and the VA both create national policies that affect the accessibility, structure, cost and outcomes of substance use disorder services. PERC is responsible for evaluating the impact of such policies.

Projects and Findings

Through the early 1990s, PERC monitored the effects of Congressional appropriations that provided $90M in recurring funds to VA substance abuse treatment programs. PERC analyses showed that the policy was quite successful at expanding access to all forms of substance abuse care in the VA as well as in nurturing emerging treatment models, notably specialty dual-diagnosis programs.

Subsequent PERC studies examined the impact of the re-organization of the VA that occurred in 1995, when the system was decentralized and medical center directors were given a mandate to move to outpatient care models. PERC studies showed a dramatic decrease in inpatient care, which was only partly made up for by expanded lower cost residential beds (Humphreys & Horst, 2002). It also showed that after an initial expansion, the number of outpatient substance use disorder programs also began to contract a few years after the change. Importantly, one PERC study suggested that as substance abuse services contracted, more substance abuse patients began being treated in higher cost medical and psychiatric units (Humphreys et al., 1997).

Currently, PERC is evaluating the impact of a smaller, but important initiative to re-invigorate VA substance abuse services, the designated funding for specialty substance use disorder programs in the 2000 Veterans' Millennium Healthcare Act. Our studies focus on barriers and facilitators of implementation, and the long-term effect of access to care and patient mix.

Implications and future directions

PERC will continue to work with the MHSHG to inform policy makers about the how the "fencing" of funds for SUD treatment in the Veterans Millenium Healthcare Act increased their effective use. This is important data to disseminate because in 2003, formal fencing of the funds ceased. PERC's other major planned effort in the policy evaluation area is a comprehensive survey of all VA specialty SUD treatment programs at the end of FY2004, which will determine the cumulative impact of VA policies on the system as a whole.

5.C. Evaluating treatment program policies and clinical practice guidelines

Background

Even when clinicians are aware of clinical practice guidelines and wish to follow them, organizational barriers may prevent them from doing so. When clinical practice guidelines are implemented, they still may not improve patient outcomes because the guidelines were generated based on research samples rather than clinical samples. Evaluating guidelines and program policies is thus an important focus of PERC's work.

Projects and Findings

To improve understanding of barriers and facilitators of good clinical practice, the MOST study examined factors associated with the decision to offer opioid substitution treatment to patients in an SUD clinic. In collaboration with a QUERI study of VA SUD directors use of clinical practice guidelines, the MOST study found that program directors that offered opiate substitution treatment to patients in their clinics were more likely to be affiliated with a medical school, to have participated in a VA or NIH grant, to express confidence in results of clinical trials, and to accurately estimate the quality of the evidence-base for a variety of clinical practices (Trafton et al., in preparation). Notably, directors' confidence in and reported use of clinical practice guidelines was not related to their decision on whether to offer OST in their clinic. This study suggests that research participation may encourage implementation of less intuitively-appealing clinical practices.

PERC has reviewed all randomized clinical trials of opioid substitution practices, and developed recommendations for clinical practice based on these studies. These recommendations were disseminated to VA health care staff via the VA publication "Practice Matters." To evaluate the real-life benefit of close adherence to these practice guidelines, the MOST study is following the progress of patients entering treatment at opioid substitution clinics that generally provide more or less guideline concordant care. This study should help determine the policies and practices that improve or limit outcomes of opioid dependent patients in current VA treatment settings. This project will evaluate the appropriateness of current clinical guidelines for opioid substitution, and aid development of interventions to improve care at VA clinics.

Finally, PERC recently completed an evaluation of treatment program policies in community residential facilities (CRFs). We sought to identify CRF program characteristics that predict patients' participation in treatment and to examine the association between these characteristics, participation, and outcomes at discharge from treatment. High expectations for patients' functioning, clear policies, structured programming, a high proportion of staff in recovery from substance abuse problems, and more emphasis on psychosocial treatment were associated with patients' participation in program services and activities. Higher expectations for functioning and a strong treatment orientation enhanced participation among better functioning patients; program support and structure enhanced participation among impaired patients. These findings show that CRF policies, services, and treatment orientations play a key role in influencing patients' engagement in treatment, which, in turn, improves patients outcomes at discharge.

Implications and Future Directions

PERC will evaluate, in collaboration with UCLA Drug Abuse Research Center, the literature on contingency management treatment of drug use disorders. All studies of this treatment conducted in the past 30 years will be meta-analyzed to generate reliable conclusions about how clinicians can apply this approach effectively in practice. PERC will also collaborate with the QUERI substance abuse coordinating center to evaluate barriers to guideline implementation in different types of treatment programs, and to develop strategies for overcoming them.

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