

# **EVIDENCE-BASED CLINICAL PRACTICE GUIDELINES IN SUBSTANCE USE DISORDERS:**

## **A Survey of VA Substance Abuse Treatment Program Leaders**

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**A Report from the Substance Abuse Module,  
Quality Enhancement Research Initiative (QUERI)**



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## Executive Summary

In order to guide the implementation of VA practice guidelines, the Substance Abuse Module of Quality Enhancement Research Initiative (QUERI) conducted a nationwide survey of leaders of VA addiction treatment programs. The survey-addressed three basic questions:

1. How familiar are program leaders with evidence-based practices and existing practice guidelines for addiction treatment?
2. What attitudes do addiction treatment program leaders hold toward evidence-based practices and practice guidelines, both overall and for specific treatment modalities?
3. To what extent is practice behavior at the respondents' programs consistent with their attitudes and beliefs about specific treatment modalities?

We mailed 220 surveys to SUD program leaders with a program-level return rate of 80% (176/220), representing 139 of 162 VA medical centers contacted (86%). Most program leaders reported being somewhat or very familiar with available practice guidelines related to Substance Use Disorders. They were most familiar with the Patient Placement Criteria of the American Society of Addiction Medicine, and least with the Agency for Healthcare Research and Quality Guidelines for the Treatment of Smoking Cessation and the VA Clinical Practice Guideline for the Treatment of Psychoses.

A large majority of program leaders agreed that practice guidelines are useful to improve quality of care, are helpful educational tools and a convenient source of advice, and can be implemented into existing programs. A majority of respondents also agreed that practice guidelines consider a clinician's experience and judgment, are not too general or too rigid to apply to individual patients, do not promote oversimplified "cookbook" care, and will improve outcomes if properly implemented. However, almost half of program leaders felt practice guidelines are implemented without adequate training. Although there was considerable support overall for practice guidelines, opinion was divided in many instances, and others endorsed a "wait and see" position.

A majority of program leaders would like to implement the VA Draft Guidelines for Management of Persons with Substance Use Disorders, although a third were neutral. Program leaders were divided on whether or not staff members understand practice guidelines, with 41% responding in the affirmative and 47% in the negative. They were neutral in their opinions about whether most of their staff members support practice guidelines; only about 25% agreed that their staff members did support them. They strongly disagreed that program philosophy is more important than randomized clinical trials (RCTs) or that RCTs are not useful in their programs.

Of eight possible barriers to implementing practice guidelines locally, program leaders perceived lack of administrative support and insufficient staff time to be the most important barriers, followed closely by lack of skills or knowledge among staff. All other barriers were rated as somewhat or very important by a majority of respondents. Among

these, formulary restrictions and need for expert consultation had somewhat lower ratings, and in each case over 40% saw them as not at all important. All strategies to improve implementation of practice guidelines were endorsed by a majority of respondents as at least somewhat useful. Staff training and easy access to guidelines in clinical settings were perceived as particularly useful.

Treatment modalities perceived as being most highly supported by scientific evidence were: extended continuing care, integrated treatment of psychiatric disorders, smoking cessation treatment and relapse prevention. Over 90% of respondents also felt that these four treatment modalities should be routinely recommended when clinically indicated. However, less than two-thirds of program leaders indicated a high level of current implementation of these treatments (with less than 50% for smoking cessation). The largest disparities between percent agreeing with routine recommendation and percent reporting high implementation occurred for behavioral marital therapy (54% vs. 8%), smoking cessation treatment (90% vs. 47%), and naltrexone treatment for alcohol dependence (45 vs. 6%). For many of the newer, evidence-based therapies, such as behavioral marital therapy and contingency management, one-fifth or more indicated they did not know the strength of evidence, and a somewhat lower percentage indicated they did not know whether these modalities should be routinely recommended.

Lack of staff time and lack of skills or knowledge among staff were consistently identified as barriers, especially for staff-intensive treatments such as psychotherapies. However, large differences in patterns of perceived barriers exist for different treatments. Low demand or low priority is commonly identified as a barrier to implementing both evidence-based psychotherapies and pharmacotherapies. Pharmacy or formulary restriction is a barrier for smoking cessation, naltrexone, and methadone. According to more than 25% of respondents, lack of confidence in effectiveness is a barrier for several therapies with relatively strong evidence of efficacy: naltrexone, opioid agonist therapy, contingency management, and manualized addiction therapy.

### **Comment**

VA SUD program leaders endorsed general agreement with guideline benefits and disagreement with guideline criticisms. Respondents were not very familiar with existing practice guidelines, suggesting that existing guidelines may not be perceived as useful enough to justify the investment of time required to learn them more completely. This gap also demonstrates a critical challenge for guideline implementation: clinicians favorably disposed to them often fail to implement them, or even to closely examine them. Also, respondents' familiarity with the ASAM Patient Placement Criteria (which have practical utility for accreditation and budgeting) suggests that guidelines that help program leaders achieve goals perceived as important are more likely to be used than those that do not.

Lack of time, knowledge, and skills are perceived as major barriers to implementation of practice guidelines, and overall, non-supervisory staff members are perceived as neutral or opposed to guidelines. Staff reductions in SUD treatment programs in recent years and a significant gap in education between program leaders and addiction therapists are possibly related factors. Contrary to expectations, conflict with program philosophy was

not rated as a significant barrier to implementation of evidence-based practices. Further study is needed to directly assess the beliefs and attitudes of SUD treatment staff members in addition to program leaders.

Opinions regarding specific treatment modalities and their implementation in programs conformed only partially to the strength of the available evidence supporting them. Modalities perceived by program leaders as efficacious but not well implemented are fertile areas for quality improvement activities and implementation trials. Particular examples identified in this study are behavioral marital therapy, smoking cessation treatment, and naltrexone treatment for alcohol dependence.

One key barrier to implementation was lack of skills and knowledge. Education and facilitation of implementation with reminders, procedures, pocket cards, and so forth would be appropriate ways to address this barrier. Another important barrier is the perception of low priority or demand for a specific intervention. This suggests that programs may be comfortable with current routines. Lack of familiarity with new interventions and a belief that their implementation will not change outcomes are factors that will need to be addressed. Program staff may also be overwhelmed with daily activities, so that learning about and implementing a new intervention may not seem feasible. Changing this will require informing clinicians about the evidence base, and helping them implement treatment modalities with which they may be unfamiliar. Formulary barriers were also important for pharmacological modalities, so intervention is needed at facility, network and national levels to promote formulary inclusion of efficacious medications. It also would be helpful to provide evidence of efficacy and cost-effectiveness to VISN clinical managers, SUD program leaders and facility medication use committees.

## Introduction

The Health Services Research and Development Service of the Veterans Health Administration has initiated a large-scale effort to improve the quality and outcomes of treatment for eight prevalent chronic diseases, including substance abuse (Demakis, McQueen et al. 2000). The Quality Enhancement Research Initiative (QUERI) seeks to determine whether implementing evidence based clinical practice guidelines will result in reduced variations in practice, increased use of evidence-based treatments, and better outcomes and quality of life for patients.

Practice guidelines have been defined as “statements systematically developed from efficacy and effectiveness research and clinical consensus for practitioners and patients to use in making decisions about appropriate care under different clinical circumstances” (Lohr, Eleazer et al. 1998). The purpose of practice guidelines is to enable clinicians to make more efficient use of resources, contribute to a reduction in the inappropriate variation of clinical practice, and act as a means of getting synthesized research evidence to clinicians and patients (Hutchinson 1998). Unfortunately, despite wide dissemination, practice guidelines have had a limited effect on physician behavior and often do not affect clinical practice or health outcomes (Kosecoff, Kanouse et al. 1987; Lomas, Anderson et al. 1989; Davis and Taylor-Vaisey 1997; Lohr, Eleazer et al. 1998; Woolf, Grol et al. 1999).

Studies about the impact of guideline implementation efforts in primary and specialty medical care identify the importance of provider knowledge, attitudes and beliefs about practice guidelines (Tunis, Hayward et al. 1994; Hayward, Guyatt et al. 1997) and their perceptions of implementation barriers or facilitating strategies (Cabana, Rand et al. 1999). However, no prior reports investigated these factors with respect to implementation of practice guidelines among substance abuse treatment providers.

The VA and Department of Defense have been collaborating on a new, comprehensive, set of evidence-based practice guidelines for the management of substance use disorders (SUDs). These guidelines differ from previous efforts in their algorithmic format and by addressing the full continuum of care, including identification and treatment of SUDs in primary care settings as well as in specialty SUD treatment programs. In order to guide implementation of the VA practice guidelines, the Substance Abuse Module of QUERI conducted a nationwide survey of leaders of VA addiction treatment programs. The purpose of this survey was to assess program leaders' knowledge, attitudes, and current practice behavior related to evidence based practices and practice guidelines for SUDs and to identify specific barriers to implementation of practice guidelines in addiction treatment programs. We also sought to determine perceived barriers to implementing practice guidelines and beliefs about potential strategies to overcome these barriers. To permit comparison with practice guideline implementation efforts in other settings, the survey included some items used in prior studies, as well as many new items specific to treatment of SUD.

## Questions Addressed

The survey addressed the following three general questions:

1. How familiar are program leaders with evidence-based practices and existing practice guidelines for addiction treatment?
2. What attitudes do addiction treatment program leaders hold toward evidence-based practices and practice guidelines, both overall and for specific treatment modalities?
3. To what extent is practice behavior at the respondents' programs consistent with their attitudes and beliefs about specific treatment modalities?

## Method

A draft survey instrument was developed, incorporating relevant items from previous literature concerning practice guidelines, current evidence-based practices in addiction treatment, and specific questions relevant to the anticipated dissemination of the new practice guideline. The draft survey was then presented to the QUERI Substance Abuse Module Executive Committee and also distributed to senior colleagues providing addiction treatment. Feedback from these groups was incorporated into the final instrument. The final instrument is described more fully below, and is included as an appendix to this report.

## Measures

SUD program leaders responded to a 195-item survey that examined their beliefs and opinions about, and knowledge of clinical practice guidelines. The following is a summary of each section of the survey (See Appendix A).

- ? Respondent characteristics including gender, age, years at current position, research experience, highest degree earned and year highest degree was earned;
- ? Guideline familiarity rated on a 3-point scale varying from "Not At All Familiar" to "Very Familiar" (e.g., familiarity with the VA Draft Guidelines for Management of Persons with Substance Use Disorders);
- ? General attitudes regarding evidence-based practice guidelines rated on a 5-point scale varying from "Strongly Disagree" to "Strongly Agree" (e.g., evidence based practice guidelines are too general to apply to individual patients);
- ? Opinions about SUD practice guidelines rated on a 5-point scale varying from "Strongly Disagree" to "Strongly Agree" (e.g., most staff members in my program support implementing evidence-based practice guidelines);

- ? General barriers to clinical practice guideline implementation rated on a 3-point scale varying from “Not At All Important” to “Very Important” (e.g., pharmacy or formulary restrictions);
- ? Usefulness of aids for improving implementation of clinical practice guidelines rated on a 3-point scale varying from “Not At All Useful” to “Very Useful” (e.g., staff training);
- ? Evaluation of 13 recommended or common treatment modalities (as defined in the survey). In addition to 10 modalities with significant empirical support, three other commonly employed modalities with weak evidence of efficacy were included in the list: addiction-related patient education groups, “routine” residential or inpatient treatment, and verbal confrontation as a standard modality to address denial. All 13 treatment modalities were rated on ‘Strength of evidence’ and ‘level of current implementation’ using separate 4-point scales - “Low Or None”, “Medium”, “High”, and “Don’t Know.” ‘Should be routinely recommended’ was rated on a different 4-point scale - “Disagree”, “Neutral”, “Agree”, and “Don’t Know.”
- ? Local barriers to implementing specific treatment modalities. Seven barriers and thirteen treatment modalities were identified. Each barriers was assessed as present or absent for each modality;
- ? Staffing summary identifying the number and type of full-time equivalent (FTEE) staff members assigned to the specialty SUD treatment program(s).
- ? Approximate percentage of unique patients receiving services in quartiles—“Not Offered”, “1 to 25%”, “26 to 50%”, “51 to 75%”, and “76 to 100%.”

### **Procedure**

Because of recent changes in VA addiction treatment programs, we conducted an enumeration of all VA SUD programs prior to data collection. Each VA facility was contacted by telephone to identify SUD programs and their leaders. A program was defined as an autonomous group of practitioners delivering services to a defined group of veterans. At many facilities, more than one program was identified. For example, an intensive addiction rehabilitation program and an opioid agonist treatment program might both be offered. Subsequently, surveys were mailed to leaders of each of the SUD treatment programs identified in the program enumeration. Individuals responsible for leading more than one program were only sent one survey, since we were interested in the leaders’ opinions, which were not specific to any particular program.

Between January and May 2000, we mailed 220 surveys to SUD program leaders with a program-level return rate of 80% (176/220), representing 139 of 162 VA medical centers contacted (86%). One survey was completed at 102 medical centers, with 37 centers having more than one program leader responding. At the item level, response rates were quite high, typically exceeding 95%. Only 3 of 195 items had more than 9 missing responses.

## Respondent and Program Characteristics

The demographic characteristics of the program leaders who responded to the survey are presented in Table 1. Respondents were predominantly mid-career men. The majority had obtained a Masters or more advanced degree, and had significant tenure in their positions. A large majority of the respondents' medical centers were affiliated with a medical school. A majority of program leaders had participated in research projects, and about one-fifth had served as principal investigator on a federally funded research grant from NIH or VA.

**Table 1. Respondent Characteristics**

<b>Characteristic</b>	<b>Mean (SD) or Percentage</b>
Age	48.9 (7.7)
Male gender	70.9%
Mean years in current position	8.0 (6.0)
<u>Highest degree earned</u>	
MD/DO	29.1%
PhD/PsyD/EdD	28.5%
MSW/MS/MA/MPH	30.8%
ALL OTHERS	9.9%
Program affiliated with medical school	82.2%
Research investigator	55.4%
Principal investigator for VA or NIH grant	19.7%

The average number of full-time equivalent staff members (FTEE) assigned to the specialty SUD treatment programs in the participating facilities is shown in Table 2. Over 90% of programs had addiction therapists or counselors. Although most programs had dedicated psychiatric, psychological, social work, and nursing staff, 17% had no dedicated access to a psychiatrist, 21% had no social workers, and 26% did not have any psychology services. A minority of programs reported having other professional staff, such as recreational therapists and chaplains. Mean total program staffing was 13.2 (SD10.6), the median was 10, and 50% of programs had staff levels between 5.5 and 18. (Keep in mind that these represent facility totals in some cases, and program totals in others.)

**Table 2. Staffing of VA SUD treatment programs.**

<b>Position</b>	<b>Mean FTEE</b>
Addiction Therapists or Counselors	3.7
Advanced Practice Nurses (CNS, ARNP, NP)	0.6
Health Science Specialists	0.3
Non-Psychiatrists (MD)	0.2
Pharmacists (RPh, PharmD)	0.1
Physicians' Assistants	0.4
Psychiatrists (MD)	1.0
Psychologists (PhD, PsyD)	1.1
Recreational Therapists	0.4
Social Workers (MSW, ACSW)	1.6
Staff Nurses (LPN)	0.7
Staff Nurses (RN, BSN)	2.0
Vocational Rehabilitation Specialists	0.3
Other Staff (e.g., chaplains)	0.8
<b>Mean total number of staff (SD)</b>	<b>13.2 (10.6)</b>

Based on program leader estimates, the approximate percentages of patients receiving various treatment services are shown in Table 3. There is considerable variability in the range of services available across programs. The most widely available services (i.e., at more than 85% of programs) were outpatient and continuing care, pharmacotherapy for co-occurring psychiatric disorders, psychotherapy for co-occurring psychiatric disorders, addiction-related self-help groups, and routine urine toxicology screening. However the percentage of programs at which more than half the patients received these services ranged from 73.2% for routine urine toxicology and 64.5% for addiction-related self-help groups to less than 30% for psychotherapy for co-occurring psychiatric disorders. Other treatment modalities were used much less frequently. Opiate substitution therapy was received by at least 25% of patients at approximately 10% of programs with nearly 75% of programs not offering this treatment. Other services unavailable at over half the programs were inpatient detoxification in a specialty SUD bed section, inpatient rehabilitation other than detox, and residential rehabilitation treatment (SARRTP). Of particular note, 32 % of programs did not offer naltrexone for alcohol dependence, and 24% did not offer smoking cessation services.

**Table 3. Estimated Percentage Of Patients Receiving Services**

(Values in percentages)	<b>Not Offered</b>	<b>1 to 25%</b>	<b>26 to 50%</b>	<b>51 to 75%</b>	<b>76 to 100%</b>
Inpatient Detoxification – Specialty Substance Abuse	78.4	10.8	4.2	3.0	3.6
Inpatient Detoxification – Medical or Psychiatric	25.4	59.8	5.3	8.3	1.2
Outpatient Alcohol Detoxification	34.5	52.4	7.1	2.4	3.6
Inpatient Treatment – Not Detoxification	84.5	10.7	2.4	0.6	1.8
Residential Treatment	51.8	10.1	8.3	11.3	18.5
Intensive Outpatient Treatment	27.4	23.2	17.9	8.9	22.6
Outpatient/Continuing Care	6.1	21.2	23.0	18.8	30.9
Brief Interventions – Addiction Treatment Program	23.2	48.2	13.7	1.8	13.1
Brief Interventions – Primary Care Clinics	48.5	38.9	7.2	1.8	3.6
Monitored Antabuse Program	46.5	51.2	1.8	0.0	0.6
Naltrexone Prescription – Alcohol Dependence	32.0	66.9	0.6	0.0	0.6
Smoking Cessation Services – Addiction Treatment Program	23.8	50.6	14.3	6.0	5.4
Integrated Primary Care – Addiction Treatment Program	47.6	17.5	9.0	6.6	19.3
Pharmacotherapy – Addiction Treatment Program	6.5	17.9	36.3	23.8	15.5
Psychotherapy – Addiction Therapy Program	7.7	41.1	22.0	12.5	16.7
Addiction-related Self-help Groups	11.2	11.2	13.0	18.3	46.2
Routine Urine Toxicology Screening	3.0	13.7	10.1	14.3	58.9
Opiate Substitution Therapy	74.6	16.0	3.6	2.4	3.6

## Measures

SUD program leaders responded to a 195-item survey that examined their beliefs and opinions about, and knowledge of clinical practice guidelines. The following is a summary of each section of the survey (See Appendix A)?.

- ? Respondent characteristics including gender, age, years at current position, research experience, highest degree earned and year highest degree was earned;
- ? Familiarity with Currently Available Guidelines rated on a 3-point scale varying from “Not At All Familiar” To “Very Familiar”;
- ? General attitudes regarding evidence-based practice guidelines rated on a 5-point scale varying from “Strongly Disagree” To “Strongly Agree”;
- ? Opinions about SUD practice guidelines rated on a 5-point scale varying from “Strongly Disagree” to “Strongly Agree”;
- ? General barriers to clinical practice guideline implementation rated on a 3-point scale varying from “Not At All Important” to “Very Important”;
- ? Usefulness of aids for improving implementation of clinical practice guidelines rated on a 3-point scale varying from “Not At All Useful” to “Very Useful”;
- ? Opinions regarding thirteen specific treatment modalities. In addition to ten modalities with significant empirical support, three other commonly employed modalities with weak evidence of efficacy were included in the list: addiction-related patient education groups, “routine” residential or inpatient treatment, and verbal confrontation as a standard modality to address denial. All thirteen treatment modalities were rated on ‘Strength of evidence’ and ‘level of current implementation’ using separate 4-point scales - “Low or None”, “Medium”, “High”, “Don’t Know.” ‘Should be routinely recommended’ was rated on a different 4-point scale - “disagree”, “neutral”, “agree”, “don’t know;”
- ? Local barriers to implementing specific treatment modalities. Seven barriers and 13 treatment modalities were identified. Each barriers was assessed as present (“yes”) or absent (“no”) for each modality;
- ? Staffing summary identifying the number and type of full-time equivalent (FTEE) staff members assigned to the specialty SUD treatment program(s).
- ? Approximate percentage of unique patients receiving services in quartiles– “not offered”, “1 to 25%”, “26 to 50%”, “51 to 75%”, “76 to 100%.”

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? NOTE: Items on tables and figures may be condensed. Refer to Appendix A for wording of items as they appeared in the survey.

## Results

### Familiarity With Clinical Practice Guidelines

Most program leaders reported being somewhat or very familiar with available practice guidelines related to Substance Use Disorders (Table 4). Fewer than 25% were “not at all” familiar with the American Society of Addiction Medicine Patient Placement Criteria (American Society of Addiction Medicine 2001), the American Psychiatric Association Clinical Practice Guidelines for the Treatment of Patients with Substance Use Disorders (56.6%) (American Psychiatric Association 1995) and the VA Draft Guidelines for the Management of Persons with Substance Use Disorders. A majority of program leaders

**Table 4. Familiarity with Existing Guidelines**

(Values in percentages)	Not at all familiar	Somewhat familiar	Very familiar
VA Depression Guideline	12.6	65.7	21.7
VA Draft SUD Guideline	23.4	44.6	32
APA SUD Guidelines	22.2	56.6	21.1
ASAM Patient Placement Criteria	24.0	28.0	48.0
AHRQ Smoking Cessation Guideline	54.9	34.9	10.3
VA Psychosis Guideline	45.7	41.1	13.1

responded that they were somewhat familiar with the VA Guidelines for the Treatment of Major Depressive Disorder (65.7%) The least familiar guidelines were the Agency for Health Care Policy and Research Clinical Practice Guidelines for Smoking Cessation and the Clinical Guidelines for the Management of Persons with Psychoses, with 54.9% and 45.7% of program leaders, respectively, endorsing “Not At All Familiar.”

### General Beliefs About Clinical Practice Guidelines

As shown in Table 5, a large majority of program leaders (over 75%) agreed or strongly agreed that practice guidelines are useful to improve quality of care, are a helpful educational tool and a convenient source of advice, and can be implemented into existing

programs. A majority of respondents also agreed practice guidelines will improve outcomes if properly implemented, practice guidelines consider a clinicians experience and judgment, practice guidelines are not too general or too rigid to apply to individual patients, and they do not promote oversimplified “cookbook” care. However, approximately 46% of program leaders felt practice guidelines are implemented without adequate training. Although there was considerable support overall for practice guidelines, opinion was divided in many instances, and others endorsed a “wait and see” neutrality. On many items 20-45% rated themselves as “neutral”, and on some items as many as one third of respondents agreed with a position critical of practice guidelines. For example, 29% agreed that practice guidelines will reduce autonomy, and another 25% were neutral. Similarly, 24% agreed that practice guidelines do not consider a clinician’s experience and judgment and 26% were neutral. While only 15% agreed that practice guidelines would be used to discipline staff, 46% were neutral.

**Table 5. General Beliefs About Clinical Practice Guidelines**

(Values in percentages)	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
Improve quality of care	1.1	3.4	10.3	60.6	24.6
Promote “cookbook” care	6.3	45.7	26.3	19.4	2.3
Control costs	3.4	9.7	37.5	43.2	6.3
Too general to apply	5.7	52.3	22.4	17.2	2.3
Educational tool	0.6	5.7	6.3	68.8	18.8
Reduce autonomy	5.7	41.1	24.6	24.6	4.0
Convenient source of advice	1.1	5.1	14.8	67.6	11.4
Too rigid to apply	7.4	56.3	23.9	10.8	1.7
Can be implemented in existing programs	0.6	6.9	11.4	70.3	10.9
Do not consider a clinicians’ experience and judgment	5.1	45.1	25.7	20.0	4.0
Will improve outcomes	1.7	6.8	33.5	47.7	10.2
Will be used to discipline staff	12.5	26.1	45.5	13.6	2.3
Are implemented without adequate training	1.7	13.7	38.3	40.0	6.3

## Opinions About Implementing Clinical Practice Guidelines

Table 6 presents data on opinions about implementing practice guidelines at the respondent's program. A majority of program leaders would like to implement the VA Draft Guidelines for Management of Persons with Substance Use Disorders, although a third were neutral. Program leaders were divided on whether or not staff members understand practice guidelines, with 41% responding in the affirmative and 47% in the negative. They were neutral in their opinions about whether most of their staff members support practice guidelines; only about 25% agreed that their staff members did support them. They strongly disagreed that program philosophy is more important than randomized clinical trials (RCTs) or that RCTs are not useful in their programs. A majority of program leaders agreed that staff members have a professional responsibility to use modalities shown to be effective by RCTs. Forty-nine percent agreed that the patients in their program are not so different from those used in RCTs to preclude implementation of findings. Although most program leaders felt RCTs are useful, their patients are similar to those used in RCTs, and they have a professional responsibility to use treatment modalities supported by RCTs, 45% felt clinical experience is more valid than RCTs.

**Table 6. Beliefs About Implementing Clinical Practice Guidelines**

(Values in percentages)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Would like to implement VA Draft practice guideline for the Management of Substance Use Disorders	1.1	12.6	33.7	44.0	8.6
Most staff members understand clinical practice guidelines	10.3	36.6	12.0	38.9	2.3
Most staff members support clinical practice guidelines	3.4	26.3	45.1	23.4	1.7
Clinical experience is more valid than randomized clinical trials	2.9	22.5	29.5	35.8	9.2
Professional responsibility to use modalities proven by randomized clinical trials	1.7	9.7	19.4	58.3	10.9
Program philosophy is more important	12.6	52.6	21.7	12.6	.6
Randomized clinical trials are not useful in program	17.7	51.4	23.4	7.4	0.0
Randomized clinical trial patients are too different from those in program	5.8	42.8	42.2	6.4	2.9

## Barriers To Practice Guideline Implementation

Of eight possible barriers to implementing practice guidelines locally, program leaders perceived lack of administrative support and insufficient staff time to be the most important barriers, followed closely by lack of skills or knowledge among staff. All other barriers were rated as somewhat or very important by a majority of respondents. Among these, formulary restrictions and need for expert consultation had somewhat lower ratings, and in each case over 40% saw them as not at all important. See Table 7 for more detail.

**Table 7. Perceived Barriers To Practice Guideline Implementation**

<b>Barriers</b> (Values in Percentages)	<b>Not At All Important</b>	<b>Somewhat Important</b>	<b>Very Important</b>
Insufficient staff time	13.1	38.1	48.9
Lack of administrative support	16.5	33.5	50.0
Pharmacy or formulary restrictions	41.9	38.4	19.8
Lack of staff skills or knowledge	12.5	48.9	38.6
Would require expert consultation to implement	42.3	37.7	20.0
Guidelines are too complicated or confusing	38.2	52.0	9.8
Lack of belief in usefulness	21.7	50.3	28.0
Inadequate information management systems	23.0	45.5	31.5

## Strategies To Improve Practice Guideline Implementation

As was the case with barriers, all strategies to improve implementation of practice guidelines were endorsed by a majority of respondents as at least somewhat useful (see Table 8).

Staff training and easy access to guidelines in clinical settings were perceived as particularly useful strategies to improve implementation of practice guidelines. A majority felt computerized reminders of recommended practices, short pamphlets summarizing guidelines, an office manual containing practice guidelines, and pocket cards would be very useful strategies. Somewhat useful strategies to improve implementation of practice

guidelines included expert consultation and a systematic review of practice guidelines published in a peer-reviewed journal.

**Table 8. Perceived Usefulness Of Implementation Strategies**

<b>Strategy</b> (Values in percentages)	<b>Not At All Useful</b>	<b>Somewhat Useful</b>	<b>Very Useful</b>
Expert consultation	6.9	49.1	44.0
Staff training	1.1	14.8	84.1
Computerized reminders	7.4	33.1	59.4
Easy access in clinical setting	1.1	19.3	79.5
Support of opinion leaders	13.1	39.2	47.7
Short pamphlet summaries	6.3	30.9	62.9
Official manual	10.2	35.2	54.5
Pocket cards	5.7	30.1	64.2
Flow chart/algorithm	9.7	43.2	47.2
Review in peer review journal	17.6	47.2	35.2

### **Specific Treatment Modalities: Evidence, Recommendation, and Implementation**

Table 9 identifies 13 recommended or commonly employed treatment modalities with respondents' ratings of the strength of scientific evidence supporting each treatment, percentage agreeing that the treatment should be routinely recommended when clinically indicated, and current levels of implementation of each treatment in their program.

The treatment modalities that were perceived as being most highly supported by scientific evidence were: extended continuing care, integrated treatment of psychiatric disorders, smoking cessation treatment and relapse prevention. Over 90% of respondents also felt that these four treatment modalities should be routinely recommended when clinically indicated. However, fewer than two-thirds of program leaders indicated a high level of current implementation of these treatments (with less than 50% for smoking cessation). The largest disparities between percent agreeing with routine recommendation and percent reporting high implementation occurred for behavioral marital therapy (54% vs. 8%), smoking cessation treatment (90% vs. 47%), and naltrexone treatment for alcohol dependence (45 vs. 6%). With the exception of patient education and verbal

confrontation, the absolute discrepancy was at least 15%, suggesting substantial program leader support to increase evidence-based treatment implementation.

Only a small percentage of program leaders (11%) considered the strength of scientific evidence “high” for verbal confrontation and relatively few agreed that it should be routinely recommended (22%). Accordingly, program leaders reported the level of current implementation of verbal confrontation was low or none (48%). There was some discrepancy between strength of evidence ratings and agreement with routine recommendation for residential treatment (47% vs. 63%) and patient education (53% vs. 81%), [not out of line compared with other ratings]. Recommendation ratings were consistently higher than evidence ratings, except for methadone dosing requirements.

For many of the newer, evidence-based therapies such as behavioral marital therapy and contingency management, one-fifth or more indicated they did not know the strength of evidence, and a somewhat lower percentage indicated they did not know whether the modalities should be routinely recommended. There were also significant proportions of program leaders indicating lack of familiarity with evidence on methadone dosing guidelines, presumably because 75% of programs did not offer this service.

### **Barriers to Implementing Specific Treatment Modalities**

In addition to identifying perceived barriers to practice guideline implementation practice guidelines overall, program leaders were asked to indicate what types of barriers are present for specific treatment modalities (Table 10). Lack of staff time and lack of skills or knowledge among staff were consistently identified as barriers, especially for staff-intensive treatments such as psychotherapies. However, large differences in patterns of perceived barriers exist for different treatments. Low demand or low priority is commonly identified as a barrier to implementing both evidence-based psychotherapies and pharmacotherapies. Pharmacy or formulary restriction is a barrier for smoking cessation, naltrexone and methadone. According to more than 25% of respondents, lack of confidence in effectiveness is a barrier for several therapies with relatively strong evidence of efficacy: naltrexone, opioid agonist therapy, contingency management, and manualized addiction therapy. It is also seen as a barrier for disulfiram, which has a weak base of empirical support, and verbal confrontation, which has no evidence of efficacy. In these latter cases, lack of confidence would be expected. Contrary to expectations, program philosophy was not commonly reported as a barrier to implementation of any treatment modalities except methadone dosing.

**Table 9. Ratings of Evidence, Recommendation, and Implementation**

(In percentages)	Strength of Evidence				Should Be Routinely Recommended				Level of Current Implementation			
	Low or None	Medium	High	Don't Know	Disagree	Neutral	Agree	Don't Know	Low or None	Medium	High	Don't Know
Residential Treatment	20.8	30.1	46.8	2.3	18.0	18.6	62.8	0.6	21.1	26.3	51.5	1.2
Patient Education	17.9	22.5	52.6	6.9	4.7	13.4	80.8	1.2	4.7	15.1	80.2	0.0
Cognitive Behavioral Relapse Prevention	1.7	25.3	70.1	2.9	1.1	4.0	93.1	1.7	5.2	32.4	61.8	0.6
Extended Continuing Care	2.3	16.1	78.2	3.4	1.2	5.2	91.9	1.7	7.6	29.1	62.2	1.2
Integrated Treatment of Psychiatric Disorders	1.2	17.3	78.0	3.5	2.9	2.9	93.1	1.2	5.8	29.1	65.1	0.0
Verbal Confrontation	54.3	28.3	11.0	6.4	54.9	22.5	22.5	0.0	48.0	30.1	21.4	0.6
Behavioral Marital Therapy	9.9	32.0	37.2	20.9	10.5	25.0	53.5	11.0	61.0	28.5	7.6	2.9
Naltrexone Treatment for Alcohol Dependence	9.2	48.6	34.1	8.1	18.5	29.5	45.1	6.9	66.7	24.7	5.7	2.9
Disulfiram Treatment for Alcohol Dependence	24.1	43.7	24.7	7.5	35.6	26.4	34.5	3.4	57.5	29.9	9.8	2.9
Contingency Management	9.8	33.5	33.5	23.1	14.0	26.7	42.4	16.9	57.9	24.0	5.8	12.3
Manualized Addiction Therapy	11.0	34.7	31.2	23.1	12.6	29.9	47.1	10.3	52.3	27.9	13.4	6.4
Smoking Cessation Treatment	2.3	19.5	69.5	8.6	2.3	5.8	90.2	1.7	15.8	35.1	47.4	1.8
Methadone Dosing Requirements	8.7	13.4	44.8	33.1	15.1	17.4	40.1	27.3	57.9	6.4	21.6	14.0

**Table 10. Barriers To Implementation Of Specific Treatment Modalities**

(In percentages)	Lack of Administrative Support	Pharmacy /Formulary Restrictions	Lack of Skills/ Knowledge	Lack of Staff Time	Lack of Confidence in Effectiveness	Low Demand/ Low Priority	Conflict with Program Philosophy
Naltrexone for Alcohol Dependence	23.6	33.5	31.8	21.6	46	57.8	6.9
Smoking Cessation Treatment	19.2	28.4	19.8	34.9	8.7	14.5	4.1
Methadone Dosing Requirements	58.1	61	47.9	45.5	34.7	53.3	41.3
Disulfiram for Alcohol Dependence	9.8	9.8	14.4	15.5	38.5	48.9	14.5
Contingency Management	40	0	57.4	54.7	35.3	50.9	16.7
Verbal Confrontation	17.3	0	15.1	9.9	49.4	33.7	41.3

## Comment

This report describes results of a national survey of VA SUD treatment program leaders' attitudes, beliefs, and practices related to clinical practice guidelines in addiction treatment. This is the first survey to extensively examine these issues in the field of addiction treatment. VA SUD program leaders endorsed general agreement with guideline benefits and disagreement with guideline criticisms. This is not surprising, given the advanced education of program leaders in the VA, medical school affiliation of many programs, and the relatively large proportion of respondents who have participated in or led research projects. Compared to surveys of physicians in general medical practice (Tunis, Hayward et al. 1994; Hayward, Guyatt et al. 1997), this sample of program leaders indicated stronger support for benefits of practice guidelines. Respondents in the current study were also more likely than Canadian physicians (Hayward, Guyatt et al. 1997) to disagree that practice guidelines are too rigid and restrictive, promote "cookbook" care, or will be used in staff disciplinary actions. On the other hand, sizable minorities agreed that practice guidelines might reduce clinician autonomy, fail to consider clinical experience, or be used for disciplinary purposes. Furthermore, a significant proportion of respondents indicated neutrality towards many items, suggesting they may withhold judgment until presented with concrete implementation.

Respondents were not very familiar with existing practice guidelines, suggesting that existing guidelines may not be perceived as useful enough to justify the investment of time required to learn them more completely. This gap also demonstrates a critical challenge for guideline implementation: clinicians favorably disposed to them often fail to implement them, or even to closely examine them. The Patient Placement Criteria of the American Society of Addiction Medicine were the only guidelines with which a substantial proportion of leaders felt very familiar. These utilization criteria for determining level of care do not constitute a full practice guideline, but they have pragmatic utility guiding clinical decisions, and are also useful for defending the need for services in the face of budgetary pressures. That these were adequate motivations for nearly one half of respondents suggests that guidelines that help program leaders achieve goals perceived as important are more likely to be used than those that do not.

Lack of time, knowledge and skills are perceived as major barriers to implementation of practice guidelines, and overall, non-supervisory staff members are perceived as neutral or opposed to guidelines. Staff reductions in SUD treatment programs in recent years and a significant gap in education between program leaders and addiction therapists are possibly related factors. Contrary to expectations, conflict with program philosophy was not rated as a significant barrier to implementation of evidence-based practices, although program clinicians may see this differently also. Further study is needed to directly assess the beliefs and attitudes of SUD treatment staff members in addition to program leaders.

Opinions regarding specific treatment modalities conformed only partially to the strength of the available evidence supporting them. For example, integrated treatment of psychiatric disorders has a modest evidence base at best, although it has considerable intuitive and practical appeal (Booth, Cook et al. 1992; RachBeisel, Scott et al. 1999). The strength of evidence for extended continuing care was rated as high, and although there is considerable descriptive evidence, there are few controlled trials (Booth, Cook et al. 1992). Although evidence for efficacy of smoking

cessation programs in general medical settings is high, there is much less evidence for efficacy in SUD treatment programs (Hays, Schroeder et al. 1999). Patient education was rated as having relatively strong support, although studies on its efficacy are lacking. On the other hand, although the evidence for efficacy of naltrexone during the first twelve weeks of treatment is much stronger than that for disulfiram (Garbutt, West et al. 1999), they were rated similarly. Other clearly efficacious modalities such as contingency management (Griffith, Rowan-Szal et al. 2000) and manualized counseling (Woody, Luborsky et al. 1983; Carroll, Nich et al. 1998) were not rated as strongly supported. The survey also identified gaps in knowledge concerning methadone maintenance, contingency management and manualized addiction therapy. It is likely that behavioral marital therapy has less relevance to many VA patients because so many are unattached when they present for treatment.

These results provide guidance about possible interventions that could take place to implement evidence-based treatments. Treatment modalities perceived by program leaders as efficacious but not well implemented are fertile areas for quality improvement activities and implementation trials. Particular examples identified in this study are behavioral marital therapy, smoking cessation treatment, and naltrexone treatment for alcohol dependence.

A key barrier to implementation was lack of skills and knowledge. Education and facilitation of implementation with reminders, procedures, pocket cards, and so forth would be appropriate ways to address this barrier. Another important barrier is the perception of low priority or demand for a specific treatment modality. This suggests that programs may be comfortable with current routines. Lack of familiarity with a new modality, and a belief that its implementation will not change outcomes may be factors that will need to be addressed. Program staff may also be overwhelmed with daily activities, so that learning about and implementing a new modality may seem overwhelming. Changing this will require informing clinicians about the evidence base, and helping them implement treatment modalities with which they may be unfamiliar. Formulary barriers were also important for pharmacological modalities, so intervention is needed at facility, network and national levels to promote formulary inclusion of efficacious medications. It may also be helpful to provide evidence of efficacy and cost-effectiveness to VISN clinical managers, SUD program leaders and facility medication use committees.

## **Conclusion**

Considerable support for evidence-based clinical practice guidelines exists among SUD program leaders. Key barriers to implementation include lack of administrative support and staff time and lack of skills and knowledge. Program leaders also see implementing many evidence-based practices as a low priority for which there is little demand. Formulary restrictions are important barriers for implementation of pharmacotherapies. Specific treatment modalities that offer opportunities for program improvement efforts are smoking cessation treatment, naltrexone treatment of alcohol dependence, extended continuing care, contingency management, manualized addiction therapy, and opioid agonist therapy.

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## **Appendix I: QSAM Survey of SUD Program Leaders**