

# Quality Indicators and Monitoring of Mental Health Services: What Do Frontline Providers Think?

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**Objective:** Many health care organizations are giving feedback to mental health care providers about their performance on quality indicators. Mental health care providers may be more likely to respond to this feedback if they believe the indicators are meaningful and within their "sphere of influence." The authors surveyed frontline mental health care providers to elicit their perceptions of widely used indicators for quality monitoring in mental health services.

**Method:** The survey was distributed to a stratified, random sample of 1,094 eligible mental health care providers at 52 Department of Veterans Affairs facilities; 684 (63%) returned the survey. The survey elicited perceptions of 21 widely used indicators in five quality domains (access, utilization, satisfaction, process, and outcomes). The data were analyzed with descriptive and multivariate methods.

**Results:** Most mental health care providers (65%) felt that feedback about these

widely used indicators would be valuable in efforts to improve care; however, only 38% felt able to influence performance related to these monitors and just 13% were willing to accept incentives/risk for their performance. Providers were most positive about satisfaction monitors and preferentially included satisfaction, access, and process monitors in performance sets to measure overall quality. Despite providers' relatively positive views of monitors, 41% felt that monitoring programs did not assist them in improving care. Providers cited numerous barriers to improving care processes.

**Conclusions:** Mental health care providers may be more receptive to monitoring efforts if satisfaction, access, and process monitors are emphasized. However, providers' views of monitoring programs appear to be less affected by concerns about specific monitors than by concerns about the accuracy of quality measurement and barriers to changing care processes.

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For many years, managed care organizations have attempted to influence providers' behavior and control costs by giving them feedback about their resource utilization (1). In response to public concerns about service quality, many managed care organizations are now giving feedback to providers about their performance on quantitative, rate-based measures of quality—often called quality indicators or monitors (2). Several task forces have called for the increased use of such indicators for mental health services (3).

Quality indicators have been developed that tap a variety of the domains thought to underlie high-quality care. Commonly used monitors for mental health services include measures of access (e.g., time to first appointment after hospital discharge), utilization (e.g., average length of inpatient stays), care processes (e.g., adequate trials of antidepressants for patients with major depression), and outcomes (e.g., changes in scores on standardized psychiatric rating scales). Quality monitors are becoming more widely used with the dissemination of clinical guidelines and the popularization of industrial quality management

techniques (4). Health care organizations that adopt guidelines often use these quantitative measures to determine if the guidelines are being followed (5).

Unfortunately, the process of collecting data and constructing monitors is costly (6), and feedback about monitor performance may or may not improve care. Study findings have been conflicting about whether providers make meaningful changes in their practices in response to audit and feedback (1, 7–9), with some studies reporting changes in practices, particularly if feedback is ongoing and coupled with incentives, and others reporting no or only minimal practice changes (7). A meta-analysis of 12 studies found that feedback resulted in statistically significant but clinically minimal changes in the use of recommended care processes (10).

Providers may fail to respond to feedback for a variety of reasons. They may not perceive particular indicators to be meaningfully related to the quality of care (11, 12), or they may feel that inaccurate data were used in constructing the indicators (13). Providers may also feel they have insufficient time or resources to change indicator perfor-

mance (12), or they may be concerned about the uses of collected data.

To increase providers' response to quality feedback, developers might select monitors that providers value and feel they can influence. Unfortunately, little is known about frontline mental health care providers' views of quality indicators and monitoring.

The goal of this study was to elicit mental health care providers' perceptions of widely used indicators for quality monitoring in mental health services. We conducted focus groups and surveyed a large sample of frontline mental health care providers to determine if there were differences in the perceived value of widely used indicators in five quality domains. We also examined providers' views of quality monitoring processes and patient, provider, and organizational factors that might be associated with more positive views. We believe this is the first large-scale effort to elicit the views of frontline mental health care providers. Such information may be useful in efforts to increase the relevance and effectiveness of quality improvement activities in mental health organizations.

## Method

The study was approved by the Department of Veterans Affairs (VA) Ann Arbor Healthcare System Institutional Review Board.

### Survey Development

We developed a preliminary survey instrument after reviewing the literature on physicians' attitudes toward guidelines and quality monitoring (12, 14, 15) and the indicator performance sets maintained or implemented by the Department of Veterans Affairs (16), APA (17), the Joint Commission for the Accreditation of Healthcare Organizations (the National Library of Healthcare Indicators) (18), the Agency for Healthcare Research and Quality (19), the National Committee on Quality Assurance (the Health Plan Employer Data and Information Set) (20), the Foundation for Accountability (21), the American Managed Behavioral Healthcare Association (Performance Based Measures for Managed Behavioral Healthcare Organizations) (22), and the Mental Health Statistics Improvement Program Consumer-Oriented Mental Health Report Card (23).

The preliminary instrument included indicators from five quality domains (access, utilization, satisfaction, process, and outcomes) and indicators for three common mental disorders (depression, schizophrenia, and substance abuse). To ensure that survey items were understandable and pertinent, more than 130 frontline clinicians were involved in development of the survey instrument.

Ten mental health managers and clinicians reviewed the first survey draft. Five focus groups were then conducted to refine survey content and enrich our understanding of providers' concerns (24). Each focus group consisted of 10 to 13 frontline mental health care providers from a variety of disciplines (total N=58). An experienced outside facilitator conducted the groups at three hospitals, and each group lasted approximately 90 minutes.

The facilitator asked participants about their perceptions of quality in mental health services, their familiarity with indicators and feedback, how quality monitoring had affected their work, their influence over and priorities for monitors, and their attitudes toward performance incentives. Participants spontaneously introduced discussion about barriers to effective monitoring.

Focus group sessions were audiotaped and transcribed. Six reviewers from different professional backgrounds reviewed two to five transcripts and independently identified and coded group themes. Reviewers then met and discussed all themes identified by two or more reviewers and reached a consensus regarding the most important and salient themes.

After reviewing the focus group data, we revised the survey instrument. Questions were added about barriers to effective monitoring and preferred "sets" of indicators. Subsequent survey drafts were pretested with three groups of mental health care providers (total N=75) at two hospitals. After each pretest, the instrument was revised and shortened on the basis of comments from participating clinicians.

### Survey Content

The final self-administered survey contained 132 items. In addition to responding to the items outlined in the previous section, providers were asked to rate 21 general and disease-specific indicators on 5-point scales measuring how valuable they thought monitoring and feedback about the indicators would be in efforts to improve the care provided by their work group (scale anchors of 1, "very valuable," and 5, "not at all valuable"), how much they could influence the indicators by changing care practices (scale anchors of 1, "can easily influence," and 5, "absolutely cannot influence"), and how willing they were to accept financial incentives coupled with risk for indicator performance (scale anchors of 1, "very willing to accept," and 5, "absolutely not willing to accept"). Other items asked about the providers' demographic characteristics and practice characteristics. (The study survey is available upon request.)

### Survey Sample

We selected a random sample of 52 facilities from a list of all VA facilities that provide mental health services. The sample was stratified by geographic region and by a VA classification system that incorporated information about facility size, teaching activity, and primary mission (general medical or neuropsychiatric). Mental health care providers within each facility were identified through a centralized personnel database, and site administrators were contacted to confirm that providers worked at the facility and were likely to meet the eligibility criteria (providing  $\geq 8$  hours of direct patient care each week and making independent treatment decisions). Within each facility, we randomly selected 67% of all eligible providers, stratified by discipline and gender, to ensure an adequate sample size.

### Survey Distribution

We used a modified version of the Dillman method for mailed surveys (25). Providers received a letter notifying them about the study, followed by a survey mailing on May 4, 2000, and a reminder/thank-you card 1 week later. Depending on their response, providers received up to two additional survey mailings, occurring 3 and 7 weeks after the initial mailing. Cover letters specified that the study was conducted by a research team rather than an administrative arm of the VA and assured respondents of confidentiality.

### Study Measures

Composite scales were constructed for providers' perceptions of indicators in the five quality domains. We also constructed subscales for providers' perceptions of value, ability to influence, and willingness to take financial incentives for each domain. Scale scores were computed if providers completed  $\geq 50\%$  of the scale items; the score was the mean of the items. Cronbach's alpha for the five domain scales ranged from 0.76 to 0.90, and Cronbach's alpha for the 15 subscales ranged from 0.63 to 0.94. We investigated whether scales assessed different constructs by

examining disattenuated correlations among the scales; all disattenuated correlations were significantly less than 1.0, indicating discriminant validity.

For several analyses, we included provider-level or facility-level variables. Providers were categorized by discipline and by whether they were “generalists” or spent  $\geq 50\%$  of their time treating patients with a specific diagnosis. Providers’ relative workload was calculated from items that asked about “hours spent in patient care per week” and “numbers of patients seen in an average patient care day.” Facilities were categorized as urban versus rural on the basis of Metropolitan Statistical Area designations (26), and facility size was categorized by tertiles on the basis of the total number of patients admitted to the facility in fiscal year 1999. The rating of facilities’ degree of academic affiliation was based on information collected by the Association of American Medical Colleges as part of the 1999–2000 Liaison Committee on Medical Education Annual Medical School Questionnaire; a major affiliation indicated that the institution was a major site for clinical clerkships, a limited affiliation indicated that the institution had brief or unique rotations of students, and a graduate affiliation indicated that the institution had only graduate training. The intensity of quality improvement activities at each site was determined from responses of facility quality managers to a modified version of the 1997 American Hospital Association’s survey on quality improvement activities (27).

### Data Analysis

We calculated descriptive statistics for all survey items, using frequencies and means. To simplify the reporting of frequencies, providers were said to have “endorsed” an item if they circled 1 or 2 on the 5-point rating scale.

We examined differences in mean ratings for the five quality domains using a mixed linear model analysis with “provider” as the random factor. (This approach is analogous to repeated measures analysis of variance.) Bonferroni correction was used for multiple comparisons. The same procedure was used to examine differences in the ratings of clinical value and degree of provider influence across the domains. When differences in providers’ willingness to take incentives were examined, responses were rank-transformed to reduce the skewness of the distribution.

Multivariable regression models were used to analyze the relationship between overall receptivity to quality monitoring and providers’ perceptions of 1) the clinical value of indicators, 2) their ability to affect indicator performance, and 3) barriers to measurement of performance and changing performance.

Finally, we used multilevel, mixed models to investigate the association between provider-level and institutional-level predictors and two dependent variables: 1) providers’ ratings of the value of the set of 21 indicators and 2) providers’ global ratings of the value of monitoring programs. Provider-level predictors included gender, professional discipline, workload, and reported diagnostic mix of patients; facility-level predictors included facility size, urban or rural setting, degree of academic affiliation, and the intensity of quality improvement activities at the site.

All analyses were completed by using SAS software, version 8.1 (SAS, Inc., Cary, N.C.).

## Results

### Response Rate

The survey was mailed to 1,189 mental health care providers; 71 mental health care providers contacted us because they failed to meet eligibility criteria. Of the remaining 1,118 providers, 708 (63%) returned the survey. After reviewing survey items, 24 respondents were excluded be-

cause of ineligibility; most did not provide  $\geq 8$  hours of patient care each week. The final sample consisted of 684 providers.

### Differences Between Respondents and Nonrespondents

Psychiatrists were less likely to return the survey than psychologists, nurses, and social workers. Providers at small teaching hospitals were more likely and those at large teaching hospitals were less likely to return the survey, compared with providers at other hospitals. There were no differences between respondents and nonrespondents in gender, individual facility, or region of the country.

### Providers’ Demographic Characteristics and Work Settings

Most providers (69%) were between age 35 and 55 years, and 59% were men. Providers spent 70% of their professional time in patient care. Ninety-two percent identified a primary work group. Thirty-nine percent worked in outpatient mental health clinics, 12% in outpatient substance abuse clinics, 7% in posttraumatic stress disorder clinics, 7% in outreach clinics or assertive community treatment programs, 15% in inpatient settings, and 20% in both inpatient and outpatient settings or in other settings such as day hospitals and primary care liaison clinics.

Physicians, psychologists, and social workers each constituted about a quarter of the sample, and advanced practice nurses and master’s-level therapists constituted the remainder. Most providers (91%) had had exposure to quality monitoring; 72% had received feedback about inpatient use; 63% about access, 73% about patient satisfaction; 26% about care processes; and 32% about patient outcomes.

### Influence and Autonomy

The large majority of providers (76%) reported having a great deal of autonomy in treatment decisions, and 48% reported having a great deal of influence within their work group. Providers’ perceived influence within their work group did not differ by discipline ( $\chi^2=10.8$ ,  $df=8$ ,  $p=0.22$ ) or length of tenure in the VA ( $\chi^2=9.3$ ,  $df=14$ ,  $p=0.81$ ), but men were more likely to perceive themselves as having influence than women ( $\chi^2=9.2$ ,  $df=2$ ,  $p<0.01$ ). Physicians, psychologists, and advanced practice nurses reported more autonomy in treatment decisions than did social workers and other therapists ( $\chi^2=18.5$ ,  $df=8$ ,  $p<0.02$ ).

### Attitudes Toward Monitors and Domains

Table 1 lists the frequency with which providers endorsed the 21 individual indicators and five domains of indicators on the potential value of feedback, their ability to influence indicator performance, and their willingness to accept financial incentives/risk for performance.

Providers were more positive about the clinical value of indicators than about their ability to influence indicator performance. Sixty-five percent believed that feedback

**TABLE 1. Ratings of Quality Monitors by a Stratified, Random Sample of Mental Health Care Providers at 52 Department of Veterans Affairs Facilities (N=684)<sup>a</sup>**

Quality Monitor Scale and Indicator	Providers Endorsing Value of Monitor in Improving the Quality of Care (%)	Providers Endorsing Clinicians' Ability to Influence Monitor (%)	Providers Endorsing Willingness to Take Incentives for Performance Measured by Monitor (%)	Overall (%)
Utilization monitors scale	58	38	16	23
Readmission rates	64	39	15	
Average length of stay	44	32	16	
Access monitors scale	61	41	21	30
Number of eligible veterans served	49	27	20	
Percentage of patients with outpatient appointment within 30 days of discharge	57	53	26	
Patients' satisfaction with access to mental health services	76	55	29	
Satisfaction monitors scale	79	70	34	54
Patients' satisfaction with mental health care providers' interpersonal manner	77	71	40	
Patients' satisfaction with involvement in decision making/treatment planning	75	74	37	
Patients' satisfaction with outcomes of mental health treatment	77	55	26	
Process monitors scale	62	47	18	29
Percentage of patients with major depressive disorder with an adequate medication trial	61	49	20	
Percentage of patients with major depressive disorder who remain in treatment until remission	60	34	13	
Multidimensional functional assessment completed	46	50	25	
Percentage of patients in mental health treatment who are screened for substance use	60	55	32	
Percentage of patients with continuing psychotic symptoms who have been taking conventional antipsychotics and are offered a trial of an atypical antipsychotic	61	58	30	
Percentage of patients with serious mental illness and family contact who are offered family sessions	62	54	32	
Percentage of patients older than age 45 who visit their primary care physician every 2 years	49	30	18	
Percentage of patients who are able to report which medications they are taking, their indications, and their side effects	65	51	26	
Outcomes monitors scale	63	31	12	22
Percentage of patients with major depressive disorder whose symptoms improve after 16 weeks of treatment	63	38	17	
Percentage of patients with major depressive disorder whose functioning improves after 16 weeks of treatment	60	38	15	
Percentage of patients with substance abuse who significantly decrease use after 16 weeks of treatment	65	33	14	
Percentage of patients with schizophrenia whose functioning improves or is maintained over a 1-year period	63	36	14	
Percentage of patients with serious mental illness who maintain stable housing	60	29	15	
All quality indicators	65	38	13	

<sup>a</sup> Monitors were rated on 5-point scales on which lower numbers indicated higher ratings of value, ability to influence, and willingness to accept incentives. The table shows the percentages of providers giving a rating of 1 or 2 for individual indicators or a mean rating of  $\leq 2.5$  for scales. Because of variation in responses for individual indicators, a smaller percentage of providers may endorse an entire scale than endorse individual indicators within the scale.

about the set of 21 indicators might be valuable in efforts to improve care, but only 38% felt able to influence performance, and just 13% were willing to accept incentives coupled with risk.

### ***Preferred Domains of Indicators***

Providers also varied significantly in their perceptions of the domains of indicators. They were most positive about indicators in the satisfaction domain; 79% felt these indicators might be helpful in efforts to improve care, 70% felt able to influence these indicators, and 34% were willing to take incentives/risk for performance. The other domains

of indicators had more mixed reviews, and there were smaller differences among them. However, providers rated process and access domains more favorably than utilization and outcome domains. (Table 2 lists the ratings of domains along the three dimensions.) Although clinicians rated the potential clinical value of outcome monitors favorably, they felt less able to influence outcome monitors than to influence most other monitors.

When asked to select up to five indicators they felt would make the "best" performance set for measuring quality, providers picked indicators from an average of three differ-



**TABLE 2. Ratings of Five Quality Domains by a Stratified, Random Sample of Mental Health Care Providers at 52 Department of Veterans Affairs Facilities (N=684)**

Rating and Domain <sup>a</sup>	Mean or Median Score
Potential value in improving quality of care <sup>b</sup>	
Satisfaction	1.91
Outcomes	2.30 <sup>c</sup>
Access	2.34 <sup>c</sup>
Process	2.40
Utilization	2.53
Ability to influence <sup>d</sup>	
Satisfaction	2.21
Process	2.68
Access	2.78
Outcomes	2.92 <sup>c</sup>
Utilization	2.93
Willingness to take incentives <sup>e</sup>	
Satisfaction	3.0
Process	3.7 <sup>c</sup>
Access	4.0
Outcomes	4.2
Utilization	5.0
Overall <sup>f</sup>	
Satisfaction	2.49
Process	2.92 <sup>c</sup>
Access	2.93
Outcomes	3.05
Utilization	3.16

<sup>a</sup> Except where otherwise noted, each domain score is significantly different from the score of the next domain listed in the column (mixed linear model analysis).

<sup>b</sup> Rated on a 5-point scale from 1, very valuable, to 5, not at all valuable. Mean ratings are reported.

<sup>c</sup> Nonsignificantly different from next domain listed.

<sup>d</sup> Rated on a 5-point scale from 1, can easily influence, to 5, absolutely cannot influence. Mean ratings are reported.

<sup>e</sup> Rated on a 5-point scale from 1, very willing to accept, to 5, absolutely not willing to accept. Medians are reported instead of means owing to the nonnormal distribution of data.

<sup>f</sup> Mean ratings are reported.

ent domains. The most common combination included indicators from the satisfaction, process, and access domains.

### Overall View of Quality Monitoring

Although providers were relatively positive about the value of specific indicators, they were divided on whether current monitoring processes were helpful. Thirty-one percent reported that quality monitoring was valuable in their individual or work group's efforts to improve care, 28% were neutral, and 41% reported that the process had little or no value.

Providers reported many barriers to effective monitoring, including barriers both to having accurate quality measurement and to using data to improve care (Table 3). More than 50% identified as measurement problems factors such as the veterans' compensation system and the use of few indicators rather than several indicators together. Fifty-five percent expressed doubt about the adequacy of case-mix adjustment. Providers also cited continuing barriers to improving care even if measurement issues were resolved. These barriers included competing time demands, inadequate staffing, administrative barriers, and lack of incentives for improving performance.

**TABLE 3. Significant or Insurmountable Barriers to Effective Quality Monitoring Identified by a Stratified, Random Sample of Mental Health Care Providers at 52 Department of Veterans Affairs Facilities (N=684)**

Barrier	Percentage of Providers Identifying Barrier
Barriers to quality measurement	
Veterans' pension system	54
Interpreting individual indicators instead of many indicators together	51
Potential misuse of data	49
Inability to discontinue indicators	46
Amount of communication/education about reasons for measuring specific monitors	44
Amount of support for data collection	43
Availability of expert consultation	42
Quality of data used in constructing indicators	40
Gaming of the system	29
Reporting of indicators at work-group level, not provider level	27
Use of indicators pertinent to small population	24
Reporting of indicators at provider level, not work-group level	21
Barriers to using data to improve care processes	
Competing demands for clinical staff's time	76
Staffing levels	66
Administrative barriers to change	55
Continual/rapid changes in the organization	54
Lack of incentives for improving performance	53
Degree of coordination between work groups or services within the organization	47
Patient factors affecting likelihood of response to treatment	44
Availability of appropriate program options for patients	38
Degree of coordination between the organization and community services	38
Too many low-functioning staff	28
Working relationships among work-group members	23

### Predictors of Positive Views of Monitoring

Not surprisingly, in a regression analysis, providers who reported more positive views of monitoring processes were also those who thought indicators were potentially valuable ( $p<0.001$ ), perceived a greater ability to influence monitors ( $p=0.02$ ), and perceived fewer barriers to improving care ( $p<0.001$ ). Providers who believed they had greater influence in their work groups also rated monitoring programs more favorably ( $p<0.001$ ).

In multilevel or mixed-model analyses, provider demographics, discipline, and workload did *not* predict global attitudes toward monitoring. Only a few facility-level characteristics, including a nonurban location and limited rather than major medical education programs, were associated with more positive views.

### Discussion

Although changing providers' practices and improving mental health care are difficult, quality monitoring programs that carefully consider the views of frontline mental health care providers are more likely to be effective.

The study reported here is, to our knowledge, the first large-scale effort to elicit frontline mental health care providers' perceptions of widely used indicators and quality monitoring.

Despite many researchers' and administrators' concerns about providers' openness to feedback (11, 12), we found that the majority of mental health care providers believed feedback about widely used indicators would be potentially valuable in efforts to improve care. However, mental health care providers expressed greater ambivalence about their ability to influence indicators and about the value of current monitoring processes.

### ***Views of Quality Indicators/Domains***

Of all domains of indicators, providers viewed satisfaction monitors most positively—perhaps because of the emphasis placed on the therapist-patient relationship in mental health treatment. Research supports a strong relationship between the therapeutic alliance and patient outcomes (28), and mental health care providers are encouraged to pay close attention to their patient relationships from the beginning of training. In addition, patients who complete satisfaction surveys often give favorable ratings to their providers (29).

Although some researchers have questioned the value of satisfaction measures because of consistently high ratings, these measures have been successful in differentiating among programs and providers, particularly if they tap multiple dimensions of care and disaggregate the components of satisfaction (30). A few studies have also found a relationship between satisfaction ratings and care processes. Meredith et al. (31) reported higher satisfaction ratings among depressed patients receiving high-quality treatment with antidepressants and/or counseling, and Druss et al. (32) found a relationship between satisfaction during inpatient psychiatric stays and administrative measures of quality.

Although providers viewed process and access indicators more favorably than outcome or utilization monitors, there were smaller differences in provider ratings among these domains. Congruent with the recent emphasis on outcomes management (33), providers gave high ratings for the value of outcome monitors, but they reported they had only a limited ability to influence these measures. Many researchers have noted that outcome monitors might be problematic despite their face validity because of poor controllability, the problem of confounding, and the need for careful case-mix adjustment (6, 34). In this study, providers expressed skepticism about the adequacy of case-mix adjustment in monitoring programs. Despite widespread use, providers perceived indicators in the utilization domain to be least valuable, perhaps because of a perceived focus on costs rather than quality.

Focus group and survey data indicated that providers were concerned about adequate breadth in quality measurement. Focus group participants emphasized the im-

portance of taking a multidimensional view of quality, and 51% of survey respondents reported that interpreting individual indicators rather than several indicators together was a problem in quality measurement. Providers selected indicators from a variety of domains when constructing preferred performance sets, most often choosing satisfaction, process, and access indicators. Organizations may find that providers are more responsive to performance sets that have adequate breadth and emphasize these domains.

Despite several studies indicating that financial incentives are effective in changing provider behavior (1), survey respondents were reluctant to accept incentives for indicator performance. Focus group participants felt that linking incentives to indicator performance was unlikely to be constructive and that providers might be tempted to "game the system" rather than make useful changes in care (e.g., providers might refer difficult patients if held accountable for their outcomes).

### ***Views of Current Quality Monitoring Processes***

Despite favorable views about the potential value of indicators, providers were less enthusiastic about the value of current monitoring processes. Their lack of enthusiasm may have stemmed from their concerns about being able to influence monitors or the many perceived barriers to improving care. Consistent with recent developments in quality improvement, such as the continuous quality improvement movement, focus group participants emphasized the importance of embedding quality monitoring and feedback in a collegial, supervisory structure and asserted that even well-constructed indicators would not be helpful if health systems did not support meaningful change (34).

### ***Predictors of Responsiveness to Quality Monitoring***

In this study, few objective provider-level or facility-level characteristics predicted positive attitudes toward monitoring. Instead, providers who were most positive were those who reported the greatest degree of influence in their work group. This personal provider-level characteristic does not lend itself to easily identifying subgroups for whom monitoring might be implemented. However, such individuals may be opinion leaders who could champion monitoring efforts.

### ***Design Considerations and Limitations***

When interpreting study results, the study design and several potential limitations should be considered. First, selective survey response may have biased the study results; providers who were more interested in monitoring may have been more likely to respond to the survey and more or less sensitive to the shortcomings of monitoring efforts. However, our response rate (63%) was commensurate or slightly higher than that obtained by most surveys targeting physicians (35) and likely provides informative, if not perfect, results.

Second, this study reports the views of mental health care providers working within the Department of Veterans Affairs. Although we sampled providers from a large number of facilities located in diverse geographic areas, all VA providers work in a larger organization that has a commitment to quality improvement and monitoring. VA providers treat many chronically ill and disadvantaged patients, work cooperatively in teams or work groups, frequently work in teaching settings, and are salaried. Most have also been exposed to quality monitoring. Thus, the views of VA providers may not generalize to mental health care providers working in other settings.

Third, our study does not capture all barriers to effective monitoring. Our goal was to describe clinicians' perceptions of indicators and monitoring processes. Clinicians frequently cited system-level barriers to monitoring; however, clinician factors, such as personal beliefs, behaviors, knowledge, and skill sets, may also play a role in whether monitoring programs are effective. Fourth, providers in this study were asked about their willingness to take financial incentives for performance only when coupled with risk. Providers may be more willing to accept incentives when there is no accompanying risk—although undesirable consequences such as “gaming” might still result.

Fifth, we examined differences among the disciplines in their perceived ability to influence the set of monitors rather than each individual monitor. Providers in some disciplines may have felt more or less able to influence specific monitors—for example, physicians may have felt more able to affect medication use than social workers. However, our study emphasized work groups' collective efforts to improve care, and we found no differences among the disciplines in providers' perceived ability to influence the set of monitors or in their perceived influence within the work group. In mental health care, work-group leaders may emerge from any discipline.

Finally, we note that our quality domain scores reflect the mean rating of the indicators within the domain and do not reflect variation in providers' responses for individual indicators. Although quality domains provide a useful framework and our scales had adequate reliability, organizations may wish to note the endorsement of individual indicators in addition to domain scores.

## Conclusions

Data from this large-scale study indicate that most frontline mental health care providers believe that feedback about widely used indicators would be valuable in improving care. However, providers are less sure of their ability to influence quality monitors and are unwilling to take incentives or assume risk for indicator performance. Providers view satisfaction monitors most favorably, and they may be most responsive to performance sets that have adequate breadth and emphasize satisfaction, process, and access monitors.

However, providers' views of monitoring programs appear less affected by their concerns about specific monitors than their concerns about the accuracy of quality measurement and barriers to changing care processes. Even if ideal indicators are constructed, organizational support and health care milieu remain critical to translating quality data and monitoring into improvements in mental health care (34).

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