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A Framework for Selecting Performance Measures for Opioid Treatment Programs

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Abstract

As a result of new federal regulations released in early 2001 that move the monitoring and evaluation of opioid treatment programs from a government regulation to an accreditation model, program staff members are now being challenged to develop performance measurement systems that improve care and service. Using measurement selection criteria is the first step in developing a performance measurement system as a component of an overall quality management (QM) strategy. Opioid treatment programs can “leapfrog” the development of such systems by using lessons learned from the healthcare quality industry. This article reviews performance measurement definitions, proposes performance measurement selection criteria, and makes a business case for Internet automation and accessibility. Performance measurement sets that are appropriate for opioid treatment programs are proposed, followed by a discussion on how performance measurement can be used within a comprehensive QM program. It is hoped that through development, adoption, and implementation of such a performance measurement program, treatment for clients and their families will continuously improve.

Keywords

accreditation; CARF; JCAHO; performance measurement; quality improvement

New federal regulations to improve the clinical outcomes in opioid treatment programs were released in January 2001 and implemented in May 2001. The regulations shift responsibility for the monitoring and evaluation of opioid treatment programs from a regulatory to an accreditation model. The need for this change, a review of methadone treatment oversight, a review of the development of accreditation requirements, and a discussion of the public’s response to the new federal regulations, as well as performance domains of importance to opioid treatment programs, have been addressed (Pelletier & Hoffman, 2001). Opioid treatment program staff members are now being challenged to develop performance measurement systems that improve care and service.

Performance Measurement

A system of performance measurement must be a component of an organization’s overall quality strategy. The strategy must conform to healthcare quality, defined as “the degree to

which health services for individuals and populations increase the likelihood of desired healthcare outcomes and are consistent with current professional knowledge” (Committee to Design a Strategy for Quality Review and Assurance in Medicare, 1990, p.4). The critical elements of this definition and those that are inextricably linked to it form the basis of a comprehensive program to monitor and measure healthcare quality. These elements are as follows:

- “health services” (includes processes of care)
- “desired health outcomes” (includes the clinical consequences of care delivered)
- “consistent with current professional knowledge” (includes new technologies in the art and science of healthcare as well as in quality management [QM] principles and practices [Palmer, Lawthers, Banks, Peterson, & Caputo, 1996, p. 100]).

In addition, the performance measurement system should conform to an accepted healthcare quality framework. The Institute of Medicine (IOM), in its work on developing a framework for a national report card (Committee on the National Quality Report on Health Care Delivery [CNQRHCD], 2001), developed four components of healthcare quality: safety, effectiveness, patient-centeredness, and timeliness (p.7). These are taken from the six specific aims for healthcare improvement proposed by the IOM Committee on Quality of Health Care in America (CQHCA, 2001). (See Figure 1.)

In response to increasing market demands, a comprehensive quality improvement (QI) program must include a performance measurement system. A performance measurement system is defined as

“an entity consisting of an automated database that facilitates performance improvement in healthcare organizations through the dissemination and collection of process and/or outcome measures of performance. Measurement systems must be able to generate internal comparisons of organization performance over time, and external comparisons of performance among participating organizations at a comparable time” (Joint Commission on Accreditation of Healthcare Organizations [JCAHO], 1998).

This definition is broader than the IOM definition of performance measurement, which relates only to “the process of care” (National Roundtable on Health Care Quality, 1999, pp. 7–8). On a community level, the Committee on Using Performance Monitoring to Improve Community Health (CUPMICH) (1997) defines performance monitoring as

a continuing community-based process of selecting indicators that can be used to measure the process and outcomes of an intervention strategy for health improvement, collecting and analyzing data on those indicators, and making the results available to the community to inform assessments of the effectiveness of an intervention and the contributions of accountable entities (p. 4).

Furthermore,

clinical performance measures are tools that assess the delivery of clinical services. Good clinical performance requires providing services that are appropriate for each client’s condition, providing them safely, competently, and in an appropriate time frame, and achieving desired outcomes in terms of those aspects of patient health and patient satisfaction that can be affected by clinical services (Palmer et al., 1996, p. 101).

Performance measurement systems have been developed and implemented in managed care organizations and clinical programs (large- and small group practices, mental health clinics, staff model health maintenance organizations) and by purchasers themselves. The American

Managed Behavioral Healthcare Association (1999) recommended that measures be developed that are performance-based and provide some indication of access to care, consumer satisfaction, and quality of care. Treatment staff members can use performance results to monitor and improve outcomes, processes of care, quality of care, accountability, satisfaction and perception, and values determination.

For providers and program administrators, performance measurement systems will provide the opportunity to benchmark with local, state and national norms and best practices and to conduct comparative analyses within and among clinics. Providers will be able to assess the effects of treatment interventions on health-related quality of life. Data will be analyzed to inform clinical care; clinic-level data could inform the development and refinement of the overall treatment program. Furthermore, local, state, and national data could serve as a resource for clinics across the country and for health services researchers interested in methadone treatment.

Over the past 10 years, payers have increasingly demanded more accountability and evidence of positive clinical outcomes. Various stakeholders, including insurance companies, the federal government (Medicaid and Medicare), and businesses in the public and private sectors, all want to know that their employees and beneficiaries are getting better and that functional status has improved because of treatment and the outlay of benefit dollars. In addition, they want more information about the effects of treatment (e.g., improvements in general health status, improvements in work performance) on their employees, beyond utilization, costs, and satisfaction with services. Performance measurement plays a critical role in meeting the accountability demands of various stakeholders.

National Performance Measurement Selection Criteria

In developing a comprehensive performance measurement system, it is critical to incorporate national and international selection criteria standards. A number of selection criteria guideline statements have been developed over the past few years, including statements from the following:

- President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry (1998)
- U.K. Department of Health (2002)
- Foundation for Accountability (2002)
- Committee on Using Performance Monitoring to Improve Community Health (1997)
- Joint Commission on Accreditation of Healthcare Organizations (1999)
- National Committee for Quality Assurance (2000)
- Institute of Medicine (Committee on Leading Health Indicators for Healthy People 2010, 1999)
- National Alliance for the Mentally Ill (Smith, Manderscheid, Flynn, & Steinwachs, 1997).

The performance measurement attributes common to the above entities' guideline statements have been reported in the set of criteria proposed to be used for a national healthcare quality report (CNQRHCD, 2001, p. 81). Common performance measurement selection criteria are listed in Figure 2. The adoption of these performance measurement selection criteria is the first step in developing a performance measurement system.

A Business Case for Automation and Online Access

Forty percent of all “hits” on the Internet involve consumer searches for health-related information (Shalala, 2000); consumers are hungry for health information that can help them improve their lives. Whereas interpersonal communications traditionally have influenced health beliefs, attitudes, and behavior change (Backer, Rogers, & Sopory, 1992), the Internet is now evolving as a “hybrid channel with persuasive capabilities of interpersonal communication and the broad reach of the mass media.” Furthermore, “Internet-based resources...enable health professionals to [access] an expanding global audience at a relatively low cost” (Cassell, Jackson, & Cheuvront, 1998, p. 77).

Quality programs in many opioid treatment programs consist of paper-driven processes and reports. There are inherent disadvantages in monitoring and measuring quality by relying on paper-based systems. Disadvantages include the following:

- lack of efficient and standardized data collection methods
- lack of a database to compare information over time and to benchmarks
- inability to query a data warehouse to perform ad hoc clinical studies
- inability to report on variables contained in a data set.

Rosenstein (1999) has made the case for a computerized QM support system, citing it as an investment in preventing costs attributable to waste and errors. As applied to QM and performance measurement decision support systems, the benefits of electronic data capture and transmission are great and may include:

- real-time results for viewing
- alerts and reminders (educational and evidence-based prompts)
- improved data access/availability/accuracy/coding/analysis
- reduced duplication
- improved lines of communication/reporting capabilities
- improved productivity/reduced documentation time
- standardization/reduced variation (Rosenstein, p. 265).

An Internet-based performance measurement solution would obviate several barriers as experienced, for example, by the developers of the Methadone Treatment Quality Assurance System (MTQAS). In phase II of the project (a feasibility study) it was found that treatment programs in various states did not have the hardware and software necessary to support MTQAS. The National Institute on Drug Abuse provided funds to purchase hardware (Ducharme, Luckey, Ahn, Fulmer, & Graham, 1999).

Online accessibility would allow forms, reports, and other analyses to be immediately available to treatment staff. For those programs not equipped with a computer, arrangements could be made to purchase services from a service bureau to input the data and generate reports.

Budgets

Opioid treatment programs operate on fixed budgets, funded primarily by public sources. Zarkin and Dunlap (1999) studied the potential impact of applying managed care on traditional methadone treatment operations. They reviewed 44 methadone clinics associated with five major organizations in New York. Annual treatment expenses amounted to \$73,533,965 for 14,941 patient slots. The average annual cost per patient was \$5,567; on average, Medicaid

funded 62% of the costs. The authors, after interviewing the staff at various sites, concluded that

If integrating methadone treatment into a managed care system results in increased administrative burden [review processes such as prior treatment authorizations and utilization reviews, both of which require extensive record-keeping], then programs believe that patient care will be adversely affected. Most programs, realizing that they probably will not be given any additional funding to cover the additional administrative expense, predict that counselors would devote more time to record-keeping and less time to actual treatment (Zarkin & Dunlap, p. 32).

Staff Concerns

These findings, which may be characteristic of a growing national concern about new financing systems and their impact upon administrative burden and treatment, may affect whether treatment program staff embrace or resist a performance measurement system. Administrative burden is always an issue when quality or performance programs are introduced. Staff members commonly react by fearing more paperwork, rather than by entering into a process improvement mindset that could potentially free them to spend even more time with their clients. Such concerns might be quelled by the creation of work groups that would incorporate (embed) performance measures into current hard copy and electronic documentation systems. A cultural shift typically is required to allow staff the opportunity to embrace the idea of decision making based upon performance measurement data (evidence) versus usual documentation and anecdotal systems. Fear generally decreases as staff members recognize the benefits of analyzing objective data, helping them to care for their clients better and more efficiently.

Positive Outcomes

Implementation of monitoring and evaluation activities typically results in eventual acceptance of the measurement process. Organizations that embrace a continuous quality improvement (CQI) process eventually begin to take measurement seriously and to consider how they can improve their treatment services. Such was the case in Oregon after a statewide quality monitoring process had been implemented in conjunction with a managed care strategy (Petillo, 2000):

People would say, 'If you're gonna monitor somebody, isn't that gonna create more resistance?' I think not; it's gonna cause less resistance. People know where they stand, and there's a competitive spirit about wanting to improve their ranking (p. 60).

This monitoring system further proved that completion of substance abuse treatment (when compared with data on patients who had not completed treatment) was associated with the following positive societal outcomes:

- substantially fewer incarcerations in the state prison system, with fewer days of incarceration (those who completed residential treatment were incarcerated at a rate 70% lower than that of the other group)
- higher wages in the period subsequent to treatment (those who completed treatment received 65% higher wages due to improvement in earning power and greater number of weeks worked)
- significantly fewer food stamps used (those who completed treatment used only one-third the number of food stamps used by the other group)
- decreased child welfare cases (the number of child welfare cases was reduced by 50% subsequent to treatment completion)

- substantially lower medical expenses (those who did not complete treatment showed a dramatic increase in the use of hospital emergency rooms during the period following treatment, compared with those who completed treatment) (Petillo, 2000, p.63–64).

A performance measurement system would provide program staff with easy-to-use tools for measuring and monitoring performance within their organizations. Developed by using Internet technology, such systems could maximize organizations' ability to show evidence of the efficacy of their treatment programs and to expend minimal financial resources in the form of typical hardware and software costs.

Performance Measurement Sets for Opioid Treatment

Performance measurement has various uses within a comprehensive quality strategy. These include internal quality or performance improvement and responsiveness to accreditation organizations.

Internal Quality Improvement

A process of continuous appraisal and self-analysis, using objective tools of measurement, is a characteristic of a progressive, consumer-centric organization. Although many programs and organizations develop programs to meet external regulatory standards, organizations that wanted to distinguish themselves in the marketplace in the latter part of the 20th century and early 21st century developed continuous improvement programs based upon quality as a core value. Organizations use data gathered by their performance/CQI programs to develop improvement opportunity plans that enhance the care and services delivered to individuals and populations.

Compliance with Accreditation Standards

Accreditation programs publish specific standards related to performance measurement and the development and maintenance of formal quality strategies and initiatives. Typically, accreditation standards do not proscribe the specific measures or tools to be used, but do identify important measurement domains. Standards emphasize components (including structure, process, outcomes indicators, and an improvement mechanism) of a comprehensive quality strategy. Over the past few accreditation cycles, consumers' input and utilization of valid, reliable measures and tools to monitor and improve healthcare quality have been emphasized. There is a national movement to describe and define "an initial core set of performance measures, for the nation's general acute care hospitals, and an enduring framework and process for updating such measures" (National Quality Forum, 2001, p. 1). The Joint Commission has established standardized, core measure sets for hospitals to use with the following health conditions: acute myocardial infarction, heart failure, community-acquired pneumonia, and pregnancy and related conditions (JCAHO, 2001). It is likely that standard measure sets eventually will be defined for the opioid population.

Recommended Performance Measurement Set Descriptions

Using the selection criteria described in Figure 2, we proposed tools for opioid treatment programs as a "menu" of valid, reliable performance measures to use as part of their overall quality strategy. It is critical that treatment programs not create new measures, but instead draw upon existing measures that have been developed based upon sound evidence and that have been tested for reliability and validity. The recommended performance measurement sets and their respective performance domains are summarized in Table 1; Figure 3 outlines the performance measurement set descriptions.

Performance Measurement for Quality Improvement

A formal, comprehensive quality program must first be in place to support the implementation and integration of a performance measurement system into an organization's QM strategy. The overall quality strategy must include the following components:

- an organizational culture that supports (through human capital and resources) and values a continuous improvement process
- adequate resources to support the planned activities of the quality program
- automation of documentation, data collection, and reporting and analysis of performance results
- integration of quality processes into the daily work of staff
- hardware and software that support the process
- continuous training in current and emerging quality measurement technologies (National Community Mental Healthcare Council [NCMHC], 1995).

Organizational Culture

Quality must be valued by an organization for its performance improvement activities to succeed. NCMHC states that organizational culture is a critical component of an organization's readiness to measure outcomes, and that it should include "evaluation as a strategy to outline priorities for improvement and to strengthen components that are working well" (NCMHC, 1995, p. 17). Furthermore, Bader (2000) proposes that quality should be elevated "to the status of finance and strategy on the board [of director's] agenda" (p. 12).

Adequate Resources

Adequate human resources must be available to support the quality effort. There must be staff who are fully dedicated to quality, as well as other personnel who give time to support the program's efforts (e.g., in project and committee work). It is preferred that quality professionals be certified in healthcare quality. Staff who are assigned accountability for QM or process improvement programs should possess knowledge, skills, and abilities in the following areas:

- management and leadership (strategic, operational)
- information management (design and data collection, analysis, interpretation)
- education, training, and communication
- performance measurement and improvement (planning, implementation, evaluation, integration) (Healthcare Quality Certification Board, 2001, insert).

Resources also include dedicated funding for training and in-service education for quality professionals and other staff who have a critical role in deploying the quality program and, more specifically, in implementing the performance measurement system.

Automation and Integration of Quality Processes

Clinical staff members in various treatment settings continue to be bombarded with requests for various data and information. Health systems in the past 20 years have attempted to help staff by developing and implementing automated systems to capture and report on various data. It comes as no surprise, therefore, that automation also should be applied to the performance measurement and improvement process. The purpose of the performance measurement system is to provide staff with easy, immediate access to the tools that they require in their quality and process improvement activities. It is possible that Web-based tools might take less time to

complete than paper forms. They are less of a burden because electronic tools are programmed to ask only those questions pertinent to the particular client. Subcategories appear onscreen only if a client/staff member responds in the affirmative to a key question.

When confronted with a new process, clinical staff tend to have concerns about how this activity, which usually is administrative in nature, will affect the time they have to care for clients. As much as possible, performance measurement and quality improvement data elements should be embedded into current data collection activities. An integrated information system, in which financial, clinical, and quality information reside in the same place, makes the process of performance measurement, reporting, and improvement an easy task. Unfortunately, many organizations have been confronted with various legacy systems that do not have the built-in functionality to integrate the necessary data.

Hardware and Software Support

Hardware and software configurations must support the work of clinical staff and enhance the collection of important data to show evidence of the treatment process and its efficacy. As previously described, the developers of MTQAS found that the clinics they were working with did not have the hardware and software to support the collection of important performance measurement data. States had to help local programs to purchase equipment.

Continuous Training and Emerging Technologies

Training is a component of system implementation that typically receives inadequate resources. The performance measurement system will have to include collateral tutorials on such topics as quality management and improvement, performance measurement, quality improvement tools (e.g., Pareto charts, cause-and-effect diagrams), and data management (collection, analysis, and reporting). New employees and new process improvement team members will need to have access to just-in-time training, which is more effective for staff who have limited time away from direct care activities.

The information revolution continues to broaden our access to information and technology. As new systems of communication and interaction emerge, the performance measurement system will have to exploit these technologies (e.g., personal digital assistants, wireless technologies) to provide enhanced support for performance measurement and improvement activities.

Applying Performance Measurement to Improve Care and Services

The performance measurement system described here will help program staff meet or exceed accreditation standards. Table 2 is a summary of accreditation standards and recommended performance measurement sets to meet these standards.

Summary

A comprehensive performance measurement system for opioid treatment programs should include a minimal set of integrated components. These (preferably automated) components would be available for use by program staff and would match the level of resources and capabilities available for CQI activities.

The steps that an opioid treatment program can take in developing a performance measurement system include the following:

1. determine performance measurement selection criteria
2. apply selection criteria to potential measurement sets

3. automate the performance measurement tools (as much as possible, embed measures into current documentation systems) and consider Internet technologies
4. incorporate performance measurement data and findings into a CQI cycle.

A comprehensive performance measurement system that is specific to the population being treated in an opioid treatment program potentially can make a difference in the care and services provided to clients and their families. It is critical that treatment programs not create new performance measures, but instead draw upon measures that have been developed based upon evidence and that have been scientifically tested in the field. Also critical is the application of selection criteria to potential measures and measurement sets. These processes conform to current national initiatives such as the National Quality Forum hospital performance measures project. Built upon scientific evidence, these programs have the potential for improving the overall quality of care and service to clients, families, and populations.

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- *Safe*: Patients should not be harmed by the care that is intended to help them, nor should harm come to those who work in healthcare (CQHCA, 2001, p. 47).
- *Effective*: Refers to care that is based on the use of systematically acquired evidence to determine whether an intervention, such as a preventive service, diagnostic test, or therapy, produces better outcomes than do alternatives—including the alternative to do nothing (CQHCA, p. 49). Evidence-based practice requires that those who give care consistently avoid both underuse of effective care and overuse of ineffective care that is more likely to harm than help the patient (Chassin, 1997).
- *Patient-centered*: Refers to healthcare that establishes a partnership among practitioners, patients, and their families (when appropriate) to ensure that decisions respect patients' wants, needs, and preferences; and that patients have the education and support they need to make decisions and participate in their own care (CNQRHCD, 2001, p. 50).
- *Timely*: Refers to obtaining needed care and minimizing unnecessary delays in getting that care (CNQRHCD, p. 53).
- *Efficient*: Refers to a healthcare system where resources are used to get the best value for the money spent (Palmer & Torgerson, 1999). The opposite of efficiency is waste, the use of resources without benefit to the patients a system is intended to help. There are at least two ways to improve efficiency: (a) reduce quality waste and (b) reduce administrative or production costs (CQHCA, p. 54).
- *Equitable*: Providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status (CQHCA, p. 6).

Figure 1.
Institute of Medicine Specific Aims for Healthcare Improvement

- *Relevance*: The measure should address features of the health-care system applicable to health professionals, policy makers, and consumers.
- *Meaningfulness and interpretability*: The measure should be understandable to at least one of the audiences. It should help inform them about the important issues or concerns.
- *Scientific or clinical evidence*: The measure should be based on evidence documenting the links between the interventions, clinical processes, and/or outcomes it addresses.
- *Reliability or reproducibility*: The measure should produce the same results when repeated in the same population and setting.
- *Feasibility*: The measure should be specified precisely. Collection of data for the measure should be inexpensive and logistically feasible.
- *Validity*: The measure should make sense (face validity), correlate well with other measures of the same aspects of care (construct validity), and capture meaningful aspects of care (content validity).
- *Health importance*: The measure should include the prevalence of the health condition to which it applies and the seriousness of the health outcomes affected (CNQRHCD, 2001, p. 81).

*Criteria are listed in order of their frequency, with the one mentioned most often listed first. The same label for a criterion can have different meanings depending upon the framework, because the criteria are not standardized. The definitions, rather than the labels, were used to construct the figure. Feasibility was used as a category covering several criteria in some of the frameworks and as a single criterion in others. Parts of this figure were adapted from NCQA's list of desirable attributes for HEDIS measures (CNQRHCD, 2001, p.81).

Figure 2.
Common Performance Measurement Selection Criteria*

Name: Methadone Treatment Quality Assurance System (MTQAS)

Description: MTQAS was developed under a grant from the National Institute on Drug Abuse (NIDA). MTQAS is “an important current research effort that offers the prospect of laying the foundation for a formal QA system for narcotic addiction treatment programs in the future” (Committee on Federal Regulations of Methadone Treatment, 1995, p. 226).

Type of Tool: MTQAS comprises these instruments: Client Profile, Initial Assessment, Periodic Assessment, and Client Discharge.

Attribution: MTQAS was developed by the Research Triangle Institute under contract number N01DA-9-8532 from NIDA, National Institutes of Health (NIH).

Reliability and Validity: Test-retest reliability of the entire MTQAS instrument was judged to be very good (0.703, Ducharme et al., 1999). Test re-test reliability and interrater reliability were established.

Administrative Burden: Initial Assessments take 15–30 minutes per client to complete; Periodic Assessments take 10–20 minutes to complete per client; Client Profiles require 2 minutes per client; and Client Discharge forms require 5 minutes to complete.

Performance Measures:

1. Clients testing positive for methadone
2. Clients testing negative for opiates
3. Clients testing negative for cocaine
4. Outcomes for clients in treatment less than 12 months
 - urine test results
 - retained in treatment
 - self-reported drug use
 - injection drug use
 - employment status
 - arrest status
 - health status
 - suicidal ideation
 - healthcare utilization
 - satisfaction with treatment
5. Outcomes for clients in treatment for more than 12 months
 - urine test results
 - retained in treatment
 - self-reported drug use
 - injection drug use
 - employment status
 - arrest status
 - health status
 - suicidal ideation
 - healthcare utilization
 - satisfaction with treatment
6. Case-mix adjusted outcomes (reduced model; same submeasures as above)
7. Characteristics of clients reassessed this quarter (clinic and state benchmarks)
 - gender
 - race/ethnicity
 - client age
 - marital status
 - educational status
8. Characteristics of clients assessed this quarter (for their clinic and all clinics in an area/region; submeasures as above)
9. Urine test results
10. Self-reported drug use and injection drug use
11. Full-time employment and arrest status
12. Health status and suicidal ideation
13. Healthcare utilization
14. Satisfaction with treatment
15. Demographic characteristics of clients admitted
16. Admission characteristics of clients admitted

Name: Addiction Severity Index (ASI)

Description: The ASI was developed for use in the clinical setting, in the course of performing outcome evaluation studies, or as a component of a continuous quality improvement program. More specifically, the ASI was "designed to evaluate the nature and severity of the problems presented by substance abusers at the start of their treatment and subsequently after discharge" (McLellan, Cacciola, & Fureman, 1996, p. 70). This tool was developed to be used with the Treatment Services Review.

Type of Tool: The ASI is a semi-structured interview with 142 items, and was not initially intended as a questionnaire or survey. The target population for the measurement tool is adults with enduring substance use illness. Scoring and training manuals are available.

Attribution: The ASI was developed by McLellan, Cacciola, and Fureman (1996, p. 70). The index is in the public domain, thus there is no charge for its use.

Reliability and Validity: The instrument has shown excellent test-retest and interrater reliability, having been scrutinized in this country and in three languages in addition to English. The instrument has been shown to have predictive, concurrent, and discriminant validity across various client types and delivery systems (McLellan, Luborsky, Cacciola, & Griffith, 1985). Normative data exist for various subgroups, including males and females entering substance abuse treatment programs for alcohol, opiate, and cocaine dependence; forensic populations; the homeless; substance-abusing pregnant women; and clients with comorbid conditions (McLellan, Cacciola et al., 1992).

Administrative Burden: The tool requires some rapport to have been developed between interviewer and client/family. To administer within a therapeutic context, the time required is 60–75 minutes (McLellan et al., 1996). Change-of-status measures are collected at discharge or treatment termination and take approximately 15–20 minutes to complete.

Performance Measures:

1. Drug and alcohol use by client in past 30 days
2. Major problematic drugs
3. Period of voluntary abstinence
4. Money spent on alcohol/drugs
5. Outpatient utilization
6. Number of days experienced drug problems in past 30 days
7. Consequences of alcohol/drug problems
8. Perception of effect of treatment

Name: Treatment Services Review (TSR)

Description: The TSR tool was developed to be administered along with the ASI. In-program and out-program (treatment provided by referral agencies) services actually used by a particular client can be measured using this tool. Findings from these data can be used to determine treatment variables that are significant to an individual or group of individuals' clinical outcomes.

Type of Tool: The 87-item tool was developed to be administered by nonprofessional staff and counseling staff in an interview format. The tool can be used with all populations who exhibit enduring substance abuse illness. It is not intended for clients to self-report. A training and scoring manual is available.

Attribution: The tool was developed by McLellan, Cacciola, and Fureman (1996, p. 73). The tool is in the public domain; there is no cost for its use.

Reliability and Validity: The TSR has been shown to have good test-retest and interrater reliability (McLellan, Alterman, Woody, & Metzger, 1992). Construct and predictive validity have been established (McLellan et al., 1992; McLellan, Arndt, Woody, & Metzger, 1993).

Administrative Burden:

Initial, periodic, and follow-up administration takes approximately 5–10 minutes to complete.

Performance Measures:

1. Physical health status
2. Healthcare utilization (treatment program and referral sources; medical, mental health)
3. Employment status
4. Support system evaluation
5. Alcohol/drug use
6. Self-help utilization (e.g., Alcoholics Anonymous, relapse prevention)
7. Legal status (including incarceration, illegal activities)
8. Family status
9. Mental/emotional status

Name: The Family Burden Interview Schedule/Short Form (FBIS/SF)

Description: The burden on a family or significant other in the world of recovery from substance addiction is great. Typically, the burden on a family lasts many years and affects family and social functioning of the identified client and his/her support system. Measuring burden over time, especially if in concert with the measurement of treatment effectiveness, can be a strong measure of organizational performance. The tool measures objective and subjective aspects of care burden, including "care given within activities of daily life, supervision of bothersome or troublesome behaviors, impact on daily routines [of the caregiver], financial expenditures, and worry" (Tessler & Gamanche, 1996, p. 110).

Type of Tool: The 65-item instrument was developed to be used in an interview format. The interview format was designed for someone with a professional background or with experience in structured interview formats. The target population is 18- to 64-year-olds who have enduring illnesses. A scoring manual is available.

Attribution: The FBIS/SF was developed by Tessler and Gamanche (1995) as a short form to a longer Family Experiences Interview Schedule. (The tool is in the public domain and can be used by contacting Richard Tessler, PhD, University of Massachusetts, Department of Sociology, Thompson Hall, Amherst, MA 01003-7525.)

Reliability and Validity: As described in Tessler and Gamanche (1996), the instrument has been judged to possess acceptable psychometric properties, reliability coefficients having been computed on two independent samples. Cronbach's alpha (α) for these two community samples were as follows: objective assistance in daily living (0.777 and 0.791), subjective assistance in daily living (0.742 and 0.761), objective supervision (0.650 and 0.612), subjective supervision (0.638 and 0.676), impact (0.568 and 0.564), and worry (0.891 and 0.798) (Tessler and Gamanche, 1996, p. 111).

Administrative Burden: The interview takes approximately 15 minutes to complete.

Performance Measures:

1. Number of days patient required assistance with
 - activities of daily living (e.g., grooming, bathing, dressing)
 - self-medication
 - housework or laundry
 - shopping (e.g., groceries, clothes)
 - preparing meals
 - transportation
 - managing money
 - remembering to go (or getting) to work, school, aftercare, friends
2. Number of days family tried to prevent or stop patient from
 - doing something embarrassing
 - making excessive demands for attention
 - keeping anyone up at night
 - injuring or threatening to injure anyone
 - talking about, threatening, or attempting suicide
 - drinking too much
 - using drugs
3. Amount of money family spent on patient's behalf
 - transportation expenses (carfare, gas, taxi)
 - clothing
 - pocket money
 - food
 - shelter
 - medication
 - mental health treatment
 - other medical expenses
 - cigarettes
 - other personal items
 - other expenses
4. Severity of financial burden in last 12 months
5. Impact on daily routines (last 30 days and permanent changes)
 - miss/late for school/work
 - social activities
 - housework or other domestic responsibilities
 - routine attention to other family members
6. Worry about patient's
 - safety
 - type of help and treatment
 - social life
 - physical health
 - living arrangements
 - financial management
 - future prospects

Name: SF-12

Description: This single-page health status survey was developed to monitor outcomes in general and specific populations. The researchers responded with a quick 12-item survey after encountering “many large-scale outcomes monitoring efforts that omitted functional health surveys because of severe constraints on the amount of data that could be collected” (Quality Metric, Inc., 2000).

Type of Tool: The instrument contains 12 items.

Attribution: The (Short-Form) SF-12 was developed by Ware, Kosinski, and Keller (1996).

Reliability and Validity: The SF-12 is a subset of the SF-36. Psychometric properties of the SF-36 have been confirmed in more than three dozen studies in the United States and other countries. The reliability of the “eight scales and two summary measures has been estimated using internal consistency, test-retest, and alternate forms (mental health scale only) methods. With few exceptions, coefficients have exceeded the minimum standard of 0.70 recommended for measures used in group comparisons; most have exceeded 0.80. Reliability estimates for physical and mental summary scores usually exceed 0.90” (Ware, 1996, p. 62). “Because of the widespread use of the SF-36 across a variety of applications, evidence of all types of validity is relevant. The content validity of the SF-36 compares favorably with other widely used generic surveys. Relative to the longer Medical Outcomes Study (MOS) measures they were constructed to reproduce, SF-36 scales typically have performed with about 80–90% empirical validity in cross-sectional and longitudinal studies. The validity of each of the eight scales and the two summary scales differ markedly as would be expected from factor analytic studies of construct validity. Specifically, the mental health, role-emotional, and social functioning scales and the mental health summary measure have been shown to be the best mental measures in numerous cross-cultural and longitudinal tests using the method of known groups validity” (Ware, p. 62).

Administrative Burden: The survey takes approximately 2 minutes to complete.

Performance Measures:

1. General health status
2. Functional health status
3. Impairment in daily activities as a result of physical health
4. Impairment in daily activities as a result of emotional health
5. Functional status related to pain
6. Functional status related to emotions
7. Impairment of social activities

Figure 3.
Performance Measurement Set Descriptions

Table 1
Recommended Opioid Performance Measurement Sets by Performance Domain

Performance Measurement Domain	MTQAS	Addiction Severity Index	Treatment Services Review	Family Burden Interview/ Short Form (SF) Schedule	SF-12
Caregiver burden				X	
Clinical status	X	X	X		
Drug use	X	X	X	X	
Employment status	X	X	X		
Functional status (mental/emotional)	X	X		X	X
Functional status (physical)				X	X
Healthcare utilization (including self-help and community services)	X	X	X		
Legal status	X	X	X		
Mental/emotional health status	X	X	X		X
Physical health status	X	X	X		X
Satisfaction	X	X			
Social support	X	X	X	X	

Table 2
Accreditation Standards and Their Opioid Performance Measurement System Components

Accrediting Bodies/Standards	Performance Measurement System Components That Will Enable Program Staff to Meet or Exceed Accreditation Standards
<p>Center for Substance Abuse Treatment Measurement and monitoring of treatment processes and outcomes, including the following:</p> <ol style="list-style-type: none"> 1. Reducing or eliminating associated criminal activities 2. Reducing behaviors contributing to the spread of infectious diseases 3. Improving quality of life by restoration of physical and mental health and functional status (CSAT, 1999) 	<ol style="list-style-type: none"> 1. MTQAS, ASI, and TSR measurement sets track legal status. Using these measure sets, reports, tutorials, QI tools, and performance improvement techniques, program staff will be able to monitor outcomes related to legal status (incarcerations, illegal/criminal activities) and develop strategies to decrease illegal activities. 2. MTQAS, ASI, TSR, and SF-12 measurement sets track physical health status (including injection drug use for high-risk patients). Using these measurement sets, reports, tutorials, QI tools, and performance improvement techniques, program staff will be able to monitor and decrease risk of infectious diseases among populations treated. 3. MTQAS, ASI, FBIS, and SF-12 measurement sets track functional status (physical and mental) and physical and mental/emotional status. As above, using these measurement sets, reports, tutorials, QI tools, and performance improvement techniques, program staff will be able to monitor and improve quality of life for individuals and populations.
<p>The Rehabilitation Accreditation Commission—CARF 1. Quality and appropriateness of services</p> <p>The organization has a systematic monitoring and evaluation process related to the ongoing measurement of quality, appropriateness, and utilization of services.</p> <ol style="list-style-type: none"> 2. Outcomes management <ul style="list-style-type: none"> • A formal outcomes management system measures program effectiveness (quality of life, symptomatology, functional status, health status), efficiency (access, use appropriateness, cost), and customer satisfaction (CARF, 1999) 	<ol style="list-style-type: none"> 1. The performance measurement system described herein can become a part of a formal, comprehensive quality strategy for an organization. Using the data gleaned from the measurement sets to improve care and service, the program will have evidence of a systematic monitoring and evaluation process. 2. Measurement sets capture outcome information. With these data and the tools and techniques described in this article, programs will have evidence of an outcomes management system and examples of improving care and service for individuals and populations served.
<p>Joint Commission on Accreditation of Healthcare Organizations Outcomes and processes such as the following should be measured and monitored:</p> <ul style="list-style-type: none"> • reducing and eliminating use of illicit opioids and illicit drugs and the problematic use of licit drugs • reducing or eliminating associated criminal activity • reducing behaviors contributing to the spread of infectious diseases; improving quality of life by restoration of physical and mental health and functional status (JCAHO, 1999a) 	<p>The measurement sets described herein track the outcomes as described in the Joint Commission's opioid accreditation standards. Once these data elements are collected, reports will be generated to inform the identification of improvement opportunities. Program staff will then be able to use tutorials, QI tools, and performance improvement techniques to improve care and services to individuals and populations.</p>