Published in final edited form as:
J Subst Abuse Treat. 2011 January ; 40(1): 35–43. doi:10.1016/j.jsat.2010.08.005.

Advancing Performance Measures for Use of Medications in Substance Abuse Treatment

Cindy Parks Thomas, Ph.D. [Chair],
Schneider Institutes for Health Policy, Heller School for Social Policy and Management, Brandeis University, Waltham, MA 02454, Phone: 781-736-3921, Fax: 781-736-3905, cthomas@brandeis.edu

Deborah W. Garnick, Sc.D.,
Brandeis University, Institute for Behavioral Health, Heller School for Social Policy and Management, 415 South Street, MS 035, Waltham, MA 02454

Constance M. Horgan, Sc.D.,
Brandeis University, Institute for Behavioral Health, Heller School for Social Policy and Management, 415 South Street, MS 035, Waltham, MA 02453

Frank McCorry, Ph.D.,
New York State Office of Alcoholism and Substance Abuse Services, 501 Seventh Avenue, New York, NY 10018

Amanda Gmyrek, Ph.D.,
JBS International, Inc., 5515 Security Lane, Suite 800, North Bethesda, MD 20852

Mady Chalk, Ph.D.,
Center for Policy Research and Analysis, Treatment Research Institute, 600 Public Ledger Building, 150 South Independence Mall West, Philadelphia, PA 19106

David Gastfriend, M.D.,
Alkermes, Inc., 88 Sidney Street, Cambridge, MA 02139

Suzanne Gelber Rinaldo, Ph.D.,
Avisa Group, 1117 Euclid Avenue, Berkeley, CA 94708

Joann Albright, Ph.D.,
Magellan Health Services, 6950 Columbia Gateway Drive, Columbia, MD 21046

Victor Capoccia, Ph.D.,
Closing the Addiction Treatment Gap, OSI Baltimore, 41 Channing Road, Watertown, MD 02472

Alex Harris, Ph.D.,
Department of Veterans Affairs, 795 Willow Road (MC 152), Menlo Park, CA 94025

Henrick J. Harwood, Ph.D.,
NASADAD, 1025 Connecticut Avenue, NW, Suite 605, Washington, DC 22036

Pamela Greenberg, M.P.P.,

Correspondence to: Cindy Parks Thomas.

Association for Behavioral Health and Wellness, 1101 Pennsylvania Avenue, NW, 6th Floor, Washington, DC 20004

Tami Mark, Ph.D.,
Thomson Reuters, 4301 Connecticut Avenue, NW, Suite 330, Washington, DC 20008

Huong Un, M.D.,
Behavioral Health, Aetna, 1100 First Avenue, Suite #200, King of Prussia, PA 19406

Marla Oros, R.N., M.S.,
The Mosaic Group, 702 W. Lake Avenue, Baltimore, MD 21210

Mark Stringer, and
Division of Alcohol and Drug Abuse, Missouri Department of Mental Health, 1706 E. Elm Street, P.O. Box 687, Jefferson City, MO 65102

James Thatcher, M.D.
Massachusetts Behavioral Health Partnership/ Value Options, 100 Federal Street, Boston, MA 02110

Abstract

Performance measures have the potential to drive high quality health care. However, technical and policy challenges exist in developing and implementing measures to assess substance use disorder (SUD) pharmacotherapy. Of critical importance in advancing performance measures for use of SUD pharmacotherapy is recognition that different measurement approaches may be needed in the public and private sectors, and will be determined by the availability of different data collection and monitoring systems. In 2009, the Washington Circle convened a panel of nationally recognized insurers, purchasers, providers, policy makers, and researchers to address this topic. The charge of the panel was to identify opportunities and challenges in advancing use of SUD pharmacotherapy performance measures across a range of systems. This paper summarizes those findings by identifying a number of critical themes related to advancing SUD pharmacotherapy performance measures, highlighting examples from the field, and recommending actions for policy makers.

1. Introduction

Treatment of substance use disorders (SUD) with pharmacotherapy, also termed medication assisted treatment (MAT), generally includes medications such as naltrexone, extended-release naltrexone, disulfiram and acamprosate for alcohol abuse and dependence and buprenorphine and methadone for opioid dependence. Use of pharmacotherapy in treating SUD is widely promoted by clinical protocols and policy recommendations, increasingly adopted in outpatient settings, and now covered by many insurers (AMA July 2008; Horgan et al. 2008; SAMHSA 1998; SAMHSA 2004). In 2007, the National Quality Forum (NQF), as part of consensus standards for the treatment of SUD, noted that “pharmacotherapy should be a standard component of treatment for SUD when effective drugs exist”(NQF 2007). While government agencies, health plans, professional associations, and foundations are promoting programs to increase access to SUD pharmacotherapy, parallel efforts are warranted to develop, test, and implement ways to assess its availability and use in practice. Currently, efforts are underway to specify performance measures that target the use of SUD medications. These measures are tools, however, that will only be useful if they are appropriately applied in a system or organization that is equipped to implement change (Horgan et al. 2005).

A combination of clinical, policy, and coverage factors provide both opportunities and challenges for developing and implementing performance measures for SUD pharmacotherapy. In 2007, SUD medications comprised less than one percent of all SUD treatment costs (Mark et al. 2009) and in 2004, SUD specific pharmacotherapy was offered in fewer than 25 percent of public and private specialty programs (Knudsen et al. 2007). To improve access, several public policy efforts are being implemented to expand use of SUD pharmacotherapy (McLellan et al. 2008), including several states that incorporate medications into coverage (Gelber S. 2008). In 11 states, Robert Wood Johnson Foundation's Advancing Recovery program (www.advancingrecovery.net) promotes evidence-based SUD practices, including access to medications. Furthermore, the enactment of the Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008 is a major step toward improving access to treatment for SUD for insured populations, and may increase use of SUD pharmacotherapy.

The Washington Circle is a group of national experts in substance abuse policy, research and performance management who seek to improve the quality and effectiveness of prevention and treatment services through the use of performance measurement systems (www.washingtoncircle.org). In 2009, with funding from the Substance Abuse and Mental Health Services Administration (SAMHSA) Center for Substance Abuse Treatment (CSAT), the Washington Circle convened a panel of major insurers, purchasers, providers, policy makers and researchers who were charged with identifying opportunities and challenges in advancing performance measures for SUD pharmacotherapy in the public and private sector. This paper describes critical questions discussed by the panel, and recommends actions to facilitate adoption of measures.

The current paper is focused on performance measurement for use of naltrexone, extended-release naltrexone, acamprosate, and disulfiram for alcohol abuse and dependence, and buprenorphine for opioid dependence, as used in the outpatient setting where ongoing services are generally provided. SUD pharmacotherapy also may include other outpatient addiction treatment pharmacotherapies (e.g., methadone for opioid addiction and a variety of smoking-cessation medications). The focus of this paper is on outpatient-based ongoing treatment of drug and alcohol use disorders using prescription medications relevant to both general medical and behavioral health specialty settings.

2. Background: SUD Pharmacotherapy Performance Measures in Development and in Use

The rationale, feasibility and application of process measures to assess performance in health care and SUD has been elaborated for multiple settings and populations, and offer lessons for the consideration of pharmacotherapy (Donabedian 1988; Garnick et al. 2002; Garnick et al. 2009; Harris et al.; Harris et al. 2007; Horgan & Garnick 2005; McCorry et al. 2000). The growing use of medications in SUD treatment, and current activities by the Washington Circle and others in measuring use of SUD pharmacotherapy, forms a background context.

The Washington Circle is currently testing a process-of-care measure that targets adults and uses claims data for its calculation. The generic specifications for a SUD pharmacotherapy prescribing rate measure (calculated separately for drug and for alcohol abuse/dependence) are:

> The number of individuals with at least one prescription for appropriate SUD medication (i.e., buprenorphine, naltrexone, acamprosate, disulfiram) within a

specified time, divided by the number of individuals with an appropriate substance abuse/dependence diagnosis, visit or service.

Another set of process measures has been advanced by the American Medical Association Physician Consortium for Process Improvement (PCPI), assessing whether patients identified with SUD are counseled regarding psychosocial and pharmacologic treatment options (AMA July 2008). This approach requires accurate reporting and specified coding of such activities through medical records, and is difficult to implement in other commonly available sources such as claims data.

Given the current range of health care systems and settings, a single performance measure may be insufficient to capture the broad spectrum of treatment system approaches to the use of SUD pharmacotherapy, and a "suite" of measures may be necessary. Additional components of a "suite" may be structural, such as availability of medications, adequate personnel to prescribe and monitor medications, availability of insurance coverage for pharmacotherapy, or the presence of purchasing contracts that require use of SUD pharmacotherapy when appropriate. These components represent building blocks necessary for the use of medications in treatment, but do not capture the actual use of SUD pharmacotherapy. This paper addresses use of process measures that define the use of SUD pharmacotherapy in practice, rather than the structural components in place to assure capacity for its use, as structural measures often are managed through public and private accreditation (Kresina et al. 2009).

Goals and data availability

There are two overarching concepts to consider with respect to advancing performance measures for SUD pharmacotherapy -- measurement *goals* and *data availability*. In terms of goals, insurers, public agencies, payers and providers vary in what they consider the most important goals for process measurement, depending upon system needs and capacity for measurement.

Major options for measurement goals include:

- Are the resources available for implementation of SUD pharmacotherapy?
- Is pharmacotherapy considered?
- Is pharmacotherapy offered?
- Is pharmacotherapy used? And, if used, is it used appropriately (i.e., in appropriate populations, appropriate dosage and duration, used in conjunction with clinical services, adequate follow-up)

In an environment where SUD pharmacotherapy has not yet been used, a basic measure of its availability may be a good starting point. In an environment where SUD pharmacotherapy is being actively disseminated, a measure of its appropriate use or levels of use may be more appropriate.

Availability of data in different systems also must be considered. For private sector programs and several public payers (e.g., Medicaid) that have administrative data systems with encounter or claims data -- and pharmacy data as well -- pharmacotherapy performance measures based on these data could serve as a natural addition to other Washington Circle initiation and engagement measures currently in use within NCQA's Health Employer Data Information System (HEDIS®) and some state systems.

However, because the substance abuse treatment system is dominated by public payers (Mark et al. 2005), a parallel approach may also be warranted. Claims-based measures using

pharmacy data may have limited value to single state authorities (SSAs) that administer the majority of SUD treatment, because most do not collect such data. Several national surveys offer additional opportunities to measure use of pharmacotherapy within the public and private SUD specialty treatment system: the National Survey of Substance Abuse Treatment Services (N-SSATS; http://www.dasis.samhsa.gov/dasis2/nssats.htm) and the Treatment Episode Data Set (TEDS; http://wwwdasis.samhsa.gov/dasis2/teds.htm) reach all states and specialty treatment providers. N-SSATS is an annual survey of all treatment providers and includes questions about the services that they provide. TEDS is a set of required data elements for every admission and discharge of clients who have received funding through the federal Substance Abuse Prevention and Treatment (SAPT) block grant. Each of these datasets currently provides a partial picture of the availability and/or use of SUD pharmacotherapy.

An emerging opportunity, perhaps the most comprehensive data source for monitoring performance, is the electronic health record (EHR). The EHR provides a direct measure of service utilization as well as clinical measures with which to directly assess care processes and certain outcomes. While EHRs are being increasingly adopted within both public and private systems with federal government support, this source is not yet widely available for performance measurement, particularly in the outpatient setting (Blumenthal 2010; DesRoches et al. 2008).

3. Advancing SUD pharmacotherapy performance measures: Identifying and addressing major questions

Several questions arise regarding the challenges to specifying and adopting SUD pharmacotherapy-related performance measures. At a general level, these questions are relevant across a spectrum of settings, but specific applications will differ based on those using measures.

Question 1: What are the key factors -- and challenges -- to adopting SUD pharmacotherapy performance measures?

Key factors for adoption of measures

The adoption of SUD pharmacotherapy performance measures is part of a larger, more comprehensive agenda that should address access to pharmacotherapy, credentialing, coverage, and broad patient and provider education on the benefits of pharmacotherapy and reasons for monitoring its use. Based on the experience of providers, program administrators and public officials, there are several factors that facilitate adoption of measures and reporting.

For both public and private payers to embrace SUD pharmacotherapy and to incorporate it into their quality and accountability monitoring, a business and clinical case for it must be made. This might include dissemination of effectiveness and cost-benefit studies of the use of SUD pharmacotherapy (e.g. Barnett 2009). Where medications are incorporated into treatment protocols, methods for reporting its use may become part of coverage decisions. In any system, the incentive for performance measurement is usually explicitly balanced against the burden of the measurement.

Considering SUD as a chronic disease will facilitate the use of process measures that focus on the timing and appropriateness of treatment services, consistent with other chronic diseases such as diabetes (AHRQ 2009; McLellan et al. 2000). Incorporating SUD-related measures into current chronic disease performance measurement will greatly improve the chances for widespread monitoring of SUD pharmacotherapy. For example, alcohol

screening and treatment, and by extension pharmacotherapy measures, may be more readily adopted if the practice (and related monitoring) is promoted within the context of benefits such a service might have in treating diabetes, cardiovascular disease, or hypertension.

Physician champions or key policy makers are often important sources of motivation for adoption of evidence-based care (Rogers 2003) and thus adoption of SUD pharmacotherapy performance measures. In the case of limited budgets, physician or administrative leaders often are able to promote maintenance of quality practices when cost-effectiveness data are limited. Champions can also motivate organizations that are in an early stage of readiness to consider and adopt SUD pharmacotherapy performance measures.

Key challenges to adoption of SUD pharmacotherapy performance measures

In addition to lack of standardized SUD pharmacotherapy performance measures, and the technical complexities inherent in developing and testing them, the challenges for measure adoption overlap with challenges to adopting SUD pharmacotherapy itself. SUD pharmacotherapy as a clinical practice is at a relatively early stage of adoption. Barriers to the widespread use of SUD pharmacotherapy have been identified and described elsewhere and include (Fuller et al. 2005; Knudsen et al. 2007; Mark et al. 2003a; Mark et al. 2003b; Thomas et al. 2003):

- resistance to pharmacotherapy and program change
- inconsistent coverage and benefits;
- lack of specific approaches to monitoring standards of care;
- lack of purchasing arrangements in the public sector;
- insufficient professional physician education;
- poor linkages between primary and specialty care; and
- limited access to information for patients and providers on the value of SUD pharmacotherapy

On the one hand, limited adoption provides greater opportunities to drive quality at an early stage in the evolution of a practice. On the other hand, a common perception is that it is premature to advance performance measures, because they may be viewed as “a second step” once a critical level of SUD pharmacotherapy use is achieved and benchmarks established. However, it is precisely through the adoption of performance measurement that benchmarks can be developed. There is considerable value in signaling the field on the importance of adopting this evidence-based practice, by laying the groundwork for measuring performance in this area.

Despite doubts regarding the timeliness of implementing SUD pharmacotherapy performance measures, interest in advancing SUD pharmacotherapy and monitoring is emerging. Magellan Health Care Services, a major national behavioral health care management company, recognizing the importance of SUD pharmacotherapy and monitoring its use, surveyed providers and identified barriers to use of office based opioid treatment (OBOT)(Albright et al. 2010). These included: coordinating logistics between providers; potential for buprenorphine diversion; fear of being overwhelmed by referrals; fear of drug enforcement agency intrusion; and on-call demands. This strongly suggests that from the provider side, measuring physician practices in this area may be met with resistance, and require provider education and incentives.

For programs run by states, the cost and financing of SUD pharmacotherapy itself, and the capacity for distribution and monitoring, present additional challenges. A substantial part of

coverage for treatment in the state and federal public system is through the SAPT block grant, in which discretion for services covered is left to the state. A 2008 survey of states identified barriers to the adoption of SUD pharmacotherapy, and illustrated why implementing uniform measures across states is challenging (Gelber S. 2008). States do not have uniform policies on coverage of each SUD pharmacotherapy. Although several states reported that they do provide coverage for some prescription SUD medications, use in practice is still limited. Within limited budgets that include both medical services and pharmacy, non-pharmacy services may take a higher priority. The challenges to implementing a new service are compounded by the enormous problems confronting states in simply maintaining services in light of substantial budget deficits due to the current economic downturn.

Lack of specific coverage for SUD pharmacotherapy has led several states and municipalities to develop their own programs to promote use of pharmacotherapy. Each of these programs, although different in specific goals and design, has incorporated monitoring and reporting in response to their program needs. Several single state authorities or county authorities have initiated bulk purchasing and/or central distribution of addiction pharmacotherapeutic agents, including Missouri, Florida, Delaware and Los Angeles County. Missouri, for example, initially established contracts allowing (but not requiring) providers to use SUD pharmacotherapy (Stringer 2008) and subsequently announced that providing access to MAT would be mandated for continued contracting (ADAW 2009). Because of the commitment of the Director of the State Division of Alcohol and Drug Abuse to funding SUD pharmacotherapy, medication purchase was appropriated within the state budget for SUD treatment, and a process was developed for its use across agencies. The director reports that monitoring of use of pharmacotherapy through utilization and cost-based measures will be critical to sustaining this component of the program (Stringer 2008).

Similarly, The Baltimore Buprenorphine Initiative (BBI) (http://www.baltimorehealth.org/buprenorphine.html) incorporates reporting of pharmacotherapy as critical feedback to its program. It addressed an absence of client-level treatment data for SUD pharmacotherapy by developing its own reporting system (Oros 2009). The BBI collects data on utilization and retention and time to induction, as well as other features that are directly used for outcome and performance measurement, program monitoring, process improvement and patient care management (Systems 2008). Ongoing challenges include lack of availability of data in a single information system easily accessible to program leaders, and the staff time and expertise required to maintain their client level information in the public system (Oros 2009).

Question 2: What are state and health plan motivations for adopting SUD pharmacotherapy performance measures, and how do these performance measures relate to other SUD performance measures?

Several representatives of health plans report that given a convincing clinical and business case, pharmacotherapy performance measures are useful in leading to wider adoption of such medications. Both public and private systems see performance measures as one way of promoting cost-effective and evidence-based practice.

One example in the private sector is Aetna's current efforts to monitor use of SUD pharmacotherapy. This followed a 2008 internal analysis indicating that pharmacotherapy was associated with clients' significantly lower utilization of inpatient behavioral and general health services six months following initiation of treatment of alcohol abuse and dependence (Un 2008). Similar benefits might be expected from identifying need and monitoring use of SUD pharmacotherapy in public programs, where states are constrained

by a limited budget and are responsible for treatment of a population that generally is low income and/or uninsured.

Public officials also report being motivated to use performance data to support funding of programs. In the Baltimore Buprenorphine Initiative, for example, motivation for measurement was driven by the then-current City Health Commissioner's strong focus and leadership and the need for data to address quality improvement in the program, but also the need to build a case for expanding the program budget (Oros 2009).

The Veterans' Health Administration (VHA) also has used performance measures for SUD, and views pharmacotherapy as an important component of treatment (Harris et al. 2009; Harris et al. 2007; Humphreys et al. 2009; VHA 2009). The VHA has multiple levels of accountability: core health care measures that are tied to executive salaries and incentives; other measures that are monitored but not linked to contracts; and standards of care that should be available to all VHA patients (e.g., opioid agonist pharmacotherapy). The availability and consideration of FDA-approved pharmacological treatments for SUDs is mandated for all facilities of the VHA (VHA 2008). In its recently revised practice guidelines (VHA 2009), VHA clearly supports the availability and active consideration of these pharmacological treatments, though use of SUD pharmacotherapy in the VHA system is still limited. For example, only three percent of patients diagnosed with an alcohol use disorder received pharmacotherapy in 2007, including seven percent of those with contact with the SUD treatment system (Harris et al. 2010). The VHA has the data and infrastructure available to operationalize SUD pharmacotherapy performance measures, and is beginning to monitor simple facility-level metrics such as the proportion of SUD diagnoses patients receiving alcohol and opioid use disorder pharmacotherapies (Harris et al. 2010).

The incorporation of performance measurement into accreditation and contracting activities often can be primary drivers of performance measurement. As noted by many panel members, having an external entity promoting standardized measures is seen as an important factor in motivating use of measures. In this regard, lessons can be drawn from dissemination of Washington Circle performance measures for identification, initiation and engagement (www.washingtoncircle.org). As will be the case for SUD pharmacotherapy, motivations for adopting these measures varied across users and depended on monitoring activities (e.g., quality improvement, responding to accreditation requirements), incentives regarding reporting to funders or seeking financial savings, and their beliefs about the evidence base for the measures (Garnick et al. 2010).

Question 3: What are the key features of SUD pharmacotherapy performance measures that are useful for various purposes such as reporting to insurers and payers, internal management, and performance-based payment systems?

Essential features of a well-designed set of performance measures for SUD pharmacotherapy are that they should be simple, easy to use, and specific to the system's goals, data and resources. Development and adoption of measures should involve stakeholders, including providers, policy makers, payers, insurers, pharmaceutical manufacturers, and consumers. Furthermore:

- Measures should be standardized whenever possible, whether across states, across private systems, or between public and private settings.
- Measures should support cost containment (i.e., efficient use of resources), and relate directly to outcomes or efficient care.
- Measures need to be able to be used as a tool to improve quality of care (i.e., be actionable).

- Measures should address individual mandates of systems and organizations. As an example, measures can be used to monitor maintenance or detoxification, and might also identify diversion.

Meeting all of these criteria may be unrealistic at this point for some systems. Nevertheless, these represent standards that are consistent with the features of performance measures as outlined by key accrediting bodies such as NCQA and the Joint Commission on Accreditation of Healthcare Organizations. The suggested "suite" of SUD pharmacotherapy performance measures could be a uniform set from which individual components can be selected, adopted and rotated.

Question 4: What data are necessary for SUD pharmacotherapy performance measures and what data are commonly available in various treatment systems or insurer programs?

As noted earlier, data availability differs considerably across systems. Generally, patient-level claims data with detailed information on each clinical service are the hallmark of private insurance systems and some public programs including Medicaid and VHA (Horgan & Garnick 2005). Behavioral health insurers often provide coverage for both public, Medicaid and private systems and collect claims data. Moreover, the VHA and Medicaid programs have sophisticated individual-level encounter datasets that often are comprehensive, cover both medical and pharmacy claims, and are quite similar to private claims data for the purpose of process measurement. The development and implementation of EHR in public and private systems also provides an important opportunity as a data source for measurement.

Finally, the N-SSATS and TEDS national surveys, noted earlier, are part of a well-developed national system of reporting information regarding substance abuse services by specialty providers, but present some limitations. As an example, as of 2008, N-SSATS asks whether or not each specific SUD medication is offered at each facility, and the proportion of patients using these medications. There is no information collected on how additional SUD medications are used beyond methadone and buprenorphine, for what types of patients, and for what diagnoses. TEDS provides detailed information on admission that might be modified to include whether pharmacotherapy is planned or offered at discharge. With some enhancements to these data collection tools, they have the potential to serve as both a testing venue for the development of SUD medication performance measures, and for the actual performance of state systems at some point in the future. Both of these datasets, however, focus on the specialty provider setting, so that primary care office-based SUD pharmacotherapy treatment will not be captured.

Question 5: What is the potential for federal and state actions to influence adoption of SUD pharmacotherapy performance measures?

A number of federal and state actions will be critical to advancing SUD pharmacotherapy performance measures. States' potential actions include incorporating pharmacotherapy performance measures into payment contracts; promoting access to SUD medication purchasing; supporting state level program demonstrations that incorporate pharmacotherapy performance measures; supporting research to demonstrate the cost effectiveness of medication use; and linking use of SUD pharmacotherapy in practice to various outcome measures (i.e., National Outcomes Measures (SAMHSA 2010). Missouri's is the first single state agency to mandate that contracted programs must provide access, either through their own services or through affiliated providers, to all FDA-approved pharmacotherapies (ADAW 2009).

As an example of how state substance abuse agencies are beginning to assess medication use within programs, the New York Single State Agency, OASAS, has initiated a transformation process whereby every certified outpatient program will be expected to offer pharmacotherapy. The transition to widespread availability of SUD pharmacotherapy is beginning with the outpatient treatment slots being developed as part of the state's sentencing reform initiative. OASAS has surveyed its agencies using Fixsen's staged model of implementation to determine each provider's readiness for implementing SUD pharmacotherapy (Fixsen et al. 1993). This information provides tools for policymakers to assess readiness of programs to initiate and manage SUD treatment pharmacotherapy, and tailor appropriate programs to facilitate adoption of pharmacotherapy.

The states' mining of Medicaid data provides another opportunity to assess the adoption of SUD pharmacotherapy and to measure system-level and individual provider performance. Massachusetts Medicaid, through its behavioral health vendor Value Options, has mandated reporting of SUD pharmacotherapy using a standardized instrument, and analysis of linked pharmacy, medical and laboratory information (Thatcher 2009). The system is set up to monitor continuity of care with monthly statewide provider comparisons; and monthly claims specific to buprenorphine such as dose and preparation, other opioid use, and encounters with other providers.

At the federal level, it will be important for the government to leverage current data collection activities, and promote the promulgation of regulations that link performance measures to financing and accreditation. It is critical to promote an adequate workforce trained to prescribe medications, and promote uniform recommendations for measurement and accountability that may be different for public sector versus private sector, but are aligned across all systems. Publicly funded agencies such as the National Institute on Drug Abuse (NIDA), SAMHSA and the National Institute on Alcohol Abuse and Alcoholism (NIAAA) should continue to support development of a knowledge base on SUD pharmacotherapy as an evidence-based and cost effective treatment.

For the private sector, governments can support collaborative activities across private systems, suggesting various data sets to be used in a pilot program. This activity may not require large grants, but rather an agreement to commit to sharing data for the purpose of examining trends in use of SUD pharmacotherapy itself, informing further development of SUD pharmacotherapy performance measures and their usefulness across systems, and linking process measures to outcomes.

4. Discussion

Based on the key questions explored by the panel, we propose specific recommendations to facilitate the development and adoption of performance measures for SUD pharmacotherapy. These range from simple endorsement to broader changes in data infrastructure.

1. Endorse guiding principles for SUD pharmacotherapy performance measurement

A range of federal and state agencies, private sector associations, and professional organizations should call for simple SUD pharmacotherapy performance measures that are designed to be useful across a range of health care settings and systems. The suggested "suite" of both structural and process measures may be the most effective way to address the need of a range of stakeholders, evolution of treatment approaches, and availability of data. These measures should reflect activities such as whether pharmacotherapy is offered, available, prescribed and part of programs. From this suite, users could select the SUD pharmacotherapy performance measure(s) most relevant/feasible for their situation.

2. Support development and testing of SUD pharmacotherapy performance measures

Currently, there are no standard, uniformly accepted measures for assessing use of SUD pharmacotherapy, beyond the measure of offering medications advanced by the AMA Physician Consortium for Performance Improvement noted earlier (AMA July 2008). With the support of SAMHSA, the Washington Circle is pilot testing SUD pharmacotherapy performance measures for use with claims data across several systems, including private health insurance and the researchers in the VHA. However, additional efforts are necessary to enhance tools for measurement of SUD pharmacotherapy in non-claims systems, such as programs funded by state substance abuse agencies.

3. Build data infrastructure for SUD pharmacotherapy performance measures

The two federally-funded data collection efforts described earlier, N-SSATS and TEDS, provide potential foundations for development of additional measures of access and use of pharmacotherapy, either at the program- or the individual encounter-level. As noted, incremental changes to N-SSATS might elicit information on the level of use of each of the SUD medications, an indication of the denominator population for treatment; or an indication of whether on intake, patients are being evaluated for suitability for SUD pharmacotherapy. TEDS could incorporate more information on whether pharmacotherapy had been used in its discharge survey. Making such changes is complicated technically and administratively, but these surveys have been revised incrementally in recent years to incorporate additional information on evidence based practices. Current instruments and questions might now be used as interim measures.

4. Offer incentives to measure and monitor SUD pharmacotherapy in reporting and payment systems

Performance measures have become standard for assessing and reporting quality of health care, and are being incorporated as components in the development of emerging performance-based payment systems in other areas of health care (Lindenauer et al. 2007; NQF 2005). Given the precedent that states can mandate programs to provide access to all approved agents as a requirement for contracting, contracts can motivate growth in adoption of SUD pharmacotherapy at several levels: performance measures may be built into contracts directly; and to the extent that payers require outcomes-based metrics, health plans could use measurement of member providers to promote pharmacotherapy as an effective practice.

Presently, state substance abuse agencies are also developing performance-based systems (Stewart et al. 2010). The example of Delaware's use of performance contracting (McLellan et al. 2008) indicates that treatment programs can be successful in responding to incentives by adopting cost-effective evidence-based practices. While Delaware's program did not specifically incorporate pharmacotherapy as a component, as pharmacotherapy is increasingly recognized as cost effective and adopted in treatment, programs could be required to adopt such specific measures.

It is important that measures – at the least, basic measures of access -- should be linked to certification, credentialing or payment systems, to the extent possible and appropriate. When SUD pharmacotherapy measurement using claims data is completed and tested, it will be feasible and important to recommend these measures for endorsement by national organizations (e.g., NQF).

5. Document and disseminate information about current monitoring activities

Information about the current and fast-changing landscape is a key first step toward promoting the adoption of SUD pharmacotherapy performance measures. This paper has

identified some innovative state SUD pharmacotherapy programs, but measures used for monitoring vary widely among them. There is not yet any comprehensive review of what specific activities are being conducted within states as laboratories for implementing measures, using electronic data systems for performance measurement, and highlighting best practices, or understanding most useful approaches. Thus, an environmental scan of the use of SUD pharmacotherapy performance measures is needed to examine what states are currently collecting, what is desired in various systems, and what approaches may be suitable to expand across states.

6. Support provider education and potential collective approaches to measure development in private and public settings through federal agency funding

As academic organizations and provider associations incorporate SUD pharmacotherapy training and certification, a core principal should be accountability, with the understanding that monitoring and reporting is a necessary function for quality improvement.

Regarding measure development, major national health insurers and researchers at VHA are participating in pharmacotherapy performance measure development with the purpose of developing standardized process measures. Implementing these across systems and assessing how such measures can influence efficient and effective provider practice will be important. Moreover, in the public sector, such as SAPT-funded services and Medicaid, cross-state collaborations can advance development and use of measures.

7. Systems that recognize the importance of measuring performance in this evidence-based practice should do the following:

- Identify a champion in each plan or system at a high level that supports use of SUD pharmacotherapy and programs to assess its use.
- Begin with simple measures that are appropriate for the system. While SUD pharmacotherapy is at an early stage in overall adoption, measures have an evolutionary quality (McCorry et al. 2000), and can be expanded and enhanced as the state of treatment does.

Advancing performance measures to drive system quality will require a multi-faceted approach as well as both public and private support. Clearly, now is an opportune time to leverage current monitoring activities, look for high-performing systems and draw lessons from them, promote regulations that foster SUD pharmacotherapy and its measurement, and complete the specification process for pharmacotherapy performance measures.

Acknowledgments

This project was funded by the Substance Abuse and Mental Health Services Administration (SAMHSA) and the Brandeis/Harvard NIDA Center to Improve the Quality of Drug Abuse Treatment.

References

AHRQ. National Healthcare Quality Report, 2008. Rockville, MD: Agency for Healthcare Research and Quality; 2009 Mar. Report No.: AHRQ Publication 090001.

Albright J, Ciaverelli R, Essess A, et al. Psychiatrist characteristics that influence use of buprenorphine medication-assisted treatment. Journal of Addiction Medicine. 2010 e-pub ahead of print.

AMA. Substance use disorders physician performance measurement set. Chicago, IL: American Psychiatric Association (APA), Physician Consortium for Performance Improvement® (PCPI), National Committee for Quality Assurance (NCQA);

Barnett PG. Comparison of costs and utilization among buprenorphine and methadone patients. Addiction 2009;104(6):982–992. [PubMed: 19466922]

Blumenthal D. Launching HITECH. N Engl J Med 2010;362(5):382–385. [PubMed: 20042745]

DesRoches CM, Campbell EG, Rao SR, et al. Electronic health records in ambulatory care--a national survey of physicians. N Engl J Med 2008;359(1):50–60. [PubMed: 18565855]

Donabedian A. The quality of care. How can it be assessed? Jama 1988;260(12):1743–1748. [PubMed: 3045356]

Fixsen DL, Blase KA. Creating new realities: program development and dissemination. J Appl Behav Anal 1993;26(4):597–615. [PubMed: 8307838]

Fuller BE, Rieckmann T, McCarty D, et al. Adoption of naltrexone to treat alcohol dependence. J Subst Abuse Treat 2005;28(3):273–280. [PubMed: 15857728]

Garnick D, Lee M, Horgan C, et al. Lessons from five states: Public sector use of Washington Circle performance measures (in review). 2010

Garnick DW, Lee MT, Chalk M, et al. Establishing the feasibility of performance measures for alcohol and other drugs. J Subst Abuse Treat 2002;23(4):375–385. [PubMed: 12495800]

Garnick DW, Lee MT, Horgan CM, et al. Adapting Washington Circle performance measures for public sector substance abuse treatment systems. Journal of Substance Abuse Treatment 2009;36(3):265–277. [PubMed: 18722075]

Gelber, SA. State Financing For Medication-Assisted Treatment: Results And Observation From A 50-State NCSL/AVISA Survey. National Council of State Legislators; 2008 Mar.

Harris AH, Kivlahan D, Bowe T, et al. Developing and Validating Process Measures of Health Care Quality: An Application to Alcohol Use Disorder Treatment. Medical Care. In press.

Harris AHS, Humphreys K, Bowe T, et al. Measuring the quality of substance use disorder treatment: Evaluating the validity of the Department of Veterans Affairs continuity of care performance measure. Journal of Substance Abuse Treatment 2009;36(3):294–305. [PubMed: 18835678]

Harris AHS, Humphreys K, Finney JW. Veterans Affairs facility performance on Washington Circle indicators and casemix-adjusted effectiveness. Journal of Substance Abuse Treatment 2007;33(4): 333–339. [PubMed: 17400416]

Harris AHS, Kivlahan D, Bowe T, et al. Pharmacotherapy of Alcohol Use Disorders in the Veterans Health Administration. Psychiatric Services. 2010 in press.

Horgan, CM.; Garnick, D. Background paper for the Institute of Medicine. Waltham: Institute for Behavioral Health, Heller School for Social Policy and Management, Brandeis University; 2005. The quality of care for adults with mental and addictive disorders: Issues in performance measurement.

Horgan CM, Reif S, Hodgkin D, et al. Availability of addiction medications in private health plans. J Subst Abuse Treat 2008;34(2):147–156. [PubMed: 17499959]

Humphreys KH, Harris AHS, Kivlahan D. Performance monitoring of substance abuse disorder intervensions in the Veterans Health Administration. American Journal of Drug and Alcohol Abuse 2009;35:123–127. [PubMed: 19462294]

Knudsen HK, Ducharme LJ, Roman PM. The adoption of medications in substance abuse treatment: associations with organizational characteristics and technology clusters. Drug Alcohol Depend 2007;87(2–3):164–174. [PubMed: 16971059]

Kresina TF, Litwin A, Marion I, et al. United States Government Oversight and Regulation of Medication Assisted Treatment for the Treatment of Opioid Dependence. Journal of Deug Policy Analysis 2009;2(1):1–23.

Lindenauer PK, Remus D, Roman S, et al. Public Reporting and Pay for Performance in Hospital Quality Improvement. The New England Journal of Medicine 2007;356(5):486–496. [PubMed: 17259444]

Mark, TL.; Coffey, RM.; McKusick, DR., et al. National Estimates of Expenditures for Mental Health Services and Substance Abuse Treatment, 1991–2001. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2005. SAMHSA Publication No. SMA 05-3999.

Mark TL, Kassed CA, Vandivort-Warren R, et al. Alcohol and opioid dependence medications: prescription trends, overall and by physician specialty. Drug Alcohol Depend 2009;99(1–3):345–349. [PubMed: 18819759]

Mark TL, Kranzler HR, Poole VH, et al. Barriers to the use of medications to treat alcoholism. Am J Addict 2003a;12(4):281–294. [PubMed: 14504021]

Mark TL, Kranzler HR, Song X. Understanding US addiction physicians' low rate of naltrexone prescription. Drug Alcohol Depend 2003b;71(3):219–228. [PubMed: 12957340]

McCorry F, Garnick DW, Bartlett J, et al. Developing performance measures for alcohol and other drug services in managed care plans. Washington Circle Group. Jt Comm J Qual Improv 2000;26(11):633–643. [PubMed: 11098426]

McLellan AT, Kemp J, Brooks A, et al. Improving public addiction treatment through performance contracting: the Delaware experiment. Health Policy 2008;87(3):296–308. [PubMed: 18325621]

McLellan AT, Lewis DC, O'Brien CP, et al. Drug dependence, a chronic medical illness: implications for treatment, insurance, and outcomes evaluation. Jama 2000;284(13):1689–1695. [PubMed: 11015800]

Alcoholism & Drug Abuse Weekly. Vol. Vol. 21. Series Missouri Requires Providers to Offer Medication-Assisted Treatment; 2009. Missouri Requires Providers to Offer Medication-Assisted Treatment; p. 3

NQF. Evidence-based treatment practices for substance use disorders, October 2005. Washington DC: National Quality Forum; 2005.

NQF. Evidence-based treatment practices for substance use disorders. 2007.

The Baltimore Buprenorphine Initiative: Presentation to the SAMHSA/ Washington Circle expert panel meeting on advancing performance measures for medication assisted treatment. Washington DC: Oros M; 2009.

Rogers, EM. Diffusion of Innovations. Fifth Edition. New York: Free Press; 2003.

SAMHSA. National Outcome Measures. (http://www.nationaloutcomemeasures.samhsa.gov/NOMS.aspx?menuID=2).

SAMHSA. Tip 28: Naltrexone and alcoholism treatment Substance Abuse and Mental Health Services Administration (SAMHSA) Center for Substance Abuse Treatment (CSAT).

SAMHSA. TIP 40: Clinical Guidelines for the Use of Buprenorphine in the Treatment of Opioid Addiction. Washington DC:

Stewart, M.; Horgan, C. Series Health Services and Financing of Treatment. Waltham, MA: 2010. Health Services and Financing of Treatment.

Missouri's state and provider partnership for implementing medication assisted treatment: Presentation to the SAMHSA/Washington Circle conference on economic issues in providing medication assisted treatment. Stringer M: Washington DC; 2008.

Systems, BSA. The Baltimore Buprenorphine Initiative Second Interim Progress Report. Baltimore: 2008 Jun.

Value Options: Massachusetts Medicaid behavioral carve out: Presentation to the meeting of the SAMHSA/Washington Circle expert panel on advancing performance measures for medication assisted treatment of substance use disorders. Thatcher J; 2009.

Thomas CP, Wallack SS, Lee S, et al. Research to practice: adoption of naltrexone in alcoholism treatment. J Subst Abuse Treat 2003;24(1):1–11. [PubMed: 12646325]

Medication Assisted Treatment for Alcohol Use Disorder. Presented at the SAMHSA/CSAT Invitational Conference on Economic Access to Treatment; Washington DC: Un H; 2009.

VHA. VHA Handbook: 1160.01: Uniform mental health services in VA medical centers and clinics. Washington DC:

VHA. VHA/DOD Clinical Practice Guideline for the Management of Substance Use Disorders: Guideline summary. Washington DC: Department of Veterans Affairs Department of Defense; 2009 Jul.