Published in final edited form as:

J Subst Abuse Treat. 2011 April ; 40(3): 241–254. doi:10.1016/j.jsat.2010.11.008.

Lessons from Five States: Public Sector Use of Washington Circle Performance Measures

Deborah W. Garnick, Sc.D.¹, Margaret T. Lee, Ph.D.¹, Constance Horgan, Sc.D.¹, Andrea Acevedo, M.S., M.A.¹, Michael Botticelli, M.A.², Spencer Clark, MSW, ACSW³, Steven Davis, Ph.D.⁴, Robert Gallati, M.A.⁵, Karin Haberlin, M.A.⁶, Andrew Hanchett, M.P.H.², Dawn Lambert-Wacey, M.A.⁵, Tracy Leeper, M.A.⁴, James Siemianowski, M.S.W.⁶, and Minakshi Tikoo, Ph.D.⁷

¹Institute for Behavioral Health, The Heller School for Social Policy and Management, Brandeis University

²Bureau of Substance Abuse Services, Massachusetts Department of Public Health

³Division of Mental Health, Developmental Disabilities and Substance Abuse Services, North Carolina Department of Health and Human Services

⁴Oklahoma Department of Mental Health and Substance Abuse Services

⁵New York State Office of Alcoholism and Substance Abuse Services

⁶Connecticut Department of Mental Health and Addictions Services

⁷University of Connecticut Health Center

Abstract

Five states (Connecticut, Massachusetts, New York, North Carolina, and Oklahoma) have incorporated Washington Circle (WC) substance abuse performance measures in various ways into their quality improvement strategies. In this paper we focus on what other states and local providers might learn from these states' experiences as they consider using WC performance measures. Using a case study approach, we report that the use of WC measures differs across these five states, although there are important common themes required for adoption and sustainability of performance measures which include: leadership, evaluation of specification and use of measures over time, state-specific adaptation of the WC measure specifications, collaboration with consultants and partners, inclusion of WC measures in the context of other initiatives, reporting to providers and the public, and data and resource requirements. As additional states adopt some of the WC measures, or adopt other performance measurement approaches, these states' experiences could help them to develop implementations based on their particular needs.

In the treatment of substance use disorders, one current focus at both the national and state levels is the specification and use of performance measures (McLellan, Chalk, & Bartlett, 2007; Substance Abuse and Mental Health Services Administration). In its 2006 report,

© 2010 Elsevier Inc. All rights reserved.

Corresponding Author: Deborah W. Garnick, Sc.D. Professor, Institute for Behavioral Health, Heller School for Social Policy and Management, Brandeis University, Mail stop 035, 415 South St., Waltham, MA 02454. Phone 781-736-3840; fax 781-736-3985; garnick@brandeis.edu.

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Improving the Quality of Health Care for Mental and Substance Use Conditions, the Institute of Medicine recommended the continued development and use of performance measures (Institute of Medicine (2006)). Currently, states are using performance indicators for a range of activities including decision-making, designing payment systems, reporting to providers and consumers, and quality improvement. Five states (Connecticut, Massachusetts, New York, North Carolina, and Oklahoma) have incorporated Washington Circle (WC) substance abuse performance measures in various ways into their quality improvement strategies. In this paper we use a case-study approach to address the following key question: What can be learned from the experience of these five states as other states consider using WC measures?

In our discussion, we first offer background information on the WC performance measures. Next, from the perspective of the co-authors who work in each of the five states, we explain each state's process of deciding to incorporate WC measures into its ongoing service delivery activities and how they have implemented the WC measures. Finally, we present common themes related to adoption and sustainability that other states may find useful when they are considering including the WC measures in the set of performance measures that they collect and report. Of course, this information is highly relevant for providers because of the implications of states' decisions on how providers are paid, the information they must send to the state and the reports they receive back, and the quality improvement activities that they are expected to carry out.

1. THE WASHINGTON CIRCLE PERFORMANCE MEASURES

Convened by the Substance Abuse and Mental Health Services Administration (SAMHSA), the Washington Circle was formed to develop and disseminate performance measures for substance abuse services with the ultimate goal of improving such services. Now used broadly in both private and public sectors, the WC performance measures:

- Were developed and tested through the collaborative work of providers, researchers, policy-makers and state representatives (Garnick, Lee, Horgan, & Acevedo, 2009; Harris, Humphreys, & Finney, 2007; National Committee on Quality Assurance, 2008; North Carolina Department of Health and Human Services, 2006; Oklahoma Department of Mental Health and Substance Abuse Services, 2006).
- Were designed to measure a floor of minimally acceptable services in the early stages of substance abuse treatment (McCorry, Garnick, Bartlett, Cotter, & Chalk, 2000).
- Focus on process, specifically the quantity and timing of substance abuse treatment services.
- Have multiple potential applications including accountability, quality improvement, reporting to providers, public reporting and, more recently, pay-for-performance approaches.

At its inception in 1998, the WC developed a model for a process of substance abuse care which represents a continuum of substance abuse services, beginning with prevention/education and continuing through recognition, treatment and maintenance (McCorry et al., 2000). The initial set of measures that the WC specified for treatment services was based on research findings showing that clients who stay longer in treatment have better outcomes (Etheridge, Craddock, Hubbard, & Rounds-Bryant, 1999; Gossop, Trakada, Stewart, & Witton, 2005; Hubbard, Craddock, & Anderson, 2003; Simpson et al., 1997; Zarkin, Dunlap, Bray, & Wechsberg, 2002). These measures focused on the minimum number of services that clients should receive in the early phases of a new treatment episode. Three

performance measures were developed and tested for private health plans: identification of adults with alcohol or other drug diagnoses, treatment initiation, treatment engagement (Garnick et al., 2002; McCorry et al., 2000).

1.1 Use of the Measures in Private, Medicaid and Veterans Health Plans

The WC selected private health plans for the initial specification and pilot testing of measures because these plans have an enrolled population and standardized datasets that make the testing of measures more straightforward (Garnick et al., 2002).

These WC measures are currently used by several groups. The National Committee for Quality Assurance (NCQA) adapted the WC measures to be included in its 2004 Healthcare Effectiveness Data and Information Set (HEDIS) for private health plans and Medicaid health plans (Garnick, Horgan, & Chalk, 2006; Garnick et al., 2002; McCorry et al., 2000; National Committee for Quality Assurance, 2007; National Committee on Quality Assurance, 2008). NCQA is an organization whose mission is to improve the quality of health care and whose activities include accrediting health plans and publishing statistics that track the quality of care delivered by the nation's health plans. Furthermore, the Veterans Health Administration currently uses similar measures to calculate performance indicators for delivery of substance use disorder services (Harris, Humphreys, Bowe, Tiet, & Finney, 2008; Harris et al., 2007).

1.2 Adaptation of WC Measures for the Public Sector

In 2004 the WC Public Sector Workgroup was formed with the mission to evaluate whether the three WC measures that had been pilot tested using data from private health plans could also be useful tools for publicly funded treatment. The workgroup included representatives from substance abuse/mental health agencies in twelve states, some local jurisdictions, federal officials from the SAMHSA Center for Substance Abuse Treatment (CSAT), and substance abuse researchers from four academic institutions.

Focusing on performance measures is particularly important for substance abuse treatment funded by the public sector because this type of funding covers the largest share of specialty treatment for substance use disorders (Mark et al., 2007). Adaptation of the measures needed to be considered because public and private sector treatment systems differ in the administrative data that they collect and in patterns of treatment that they provide. Only six states of the 12 conducted empirical pilot testing because calculation and use of the WC measures require the following two types of administrative data:

- *Client Characteristics.* All state substance abuse agencies collect admissions and discharge data that have the core data elements required by SAMHSA for the Treatment Episode Data Set (TEDS) (SAMHSA, 2006). This information can be used to examine adherence to performance measures summarized by provider site or clients' level of care, demographics, substance use problems, or frequency of use.
- *Utilization.* Encounter level data, similar to the claims data maintained at commercial health plans, typically include details regarding the type and amount of treatment services provided and the dates of service.

Based on review of pilot test data, the WC Public Sector Workgroup revised the measures as summarized below (Garnick, Lee, Horgan, Acevedo, & the Washington Circle Public Sector Workgroup, 2009). Due to differences in treatment approach and client severity across the various levels of care, performance measures are calculated separately by level of care. First, the original set of measures was considered:

- *Identification*, which is defined as the number of individuals receiving substance abuse treatment out of an eligible population was deemed infeasible because public-sector agencies, unlike private health plans, generally do not serve an enrolled population. However, North Carolina, measures levels of service penetration on a quarterly basis using Medicaid and state claims data as a way to track client access as a local and state performance indicator in comparison to treatment need estimates portrayed in national surveys (e.g., National Survey on Drug Use and Health).
- *Initiation and engagement* were measures that were retained for outpatient and intensive outpatient treatment (IOP).

Outpatient (OP) initiation refers to the percent of individuals who have an index outpatient service (denoting a new episode of treatment with no other SA services in the previous 60 days) and received a second SA service (other than detoxification or crisis care) within 14 days after the index service. *Outpatient engagement* is the percent of individuals who initiated OP substance abuse treatment and received two additional services within 30 days after initiation. Parallel definitions were developed for intensive outpatient treatment episodes.

Next, four new measures were specified for analyzing public sector data, each based on the concept of continuity of treatment:

- Continuity of treatment after residential treatment
- Continuity of treatment after inpatient hospital stays
- Continuity of treatment after positive assessment
- Continuity of treatment after detoxification

These are all defined similarly as the percent of individuals discharged from residential, inpatient, or detoxification services or the percent of positive assessments that are followed up with another treatment, additional assessment, or case management service within 14 days after discharge or assessment.

Descriptions of the data requirements, as well as detailed descriptions of the measures and their specifications can be found on the WC's website at: www.washingtoncircle.org

2. USE OF WASHINGTON CIRCLE MEASURES IN FIVE STATES

Five states have used the WC measures for performance monitoring, pay-for-performance and/or quality improvement. In this section, co-authors from each of the five states describe their decision-making process regarding adoption of the WC measures and their current use of those measures. These descriptions form a snapshot of states' activities because their use of the measures continues to change and evolve.

2.1 Connecticut

Connecticut offers an example of an adapted WC measure being used as one element of a performance management and reporting system for providers.

History and decision to use the measures—The Connecticut Department of Mental Health and Addiction Services (CT-DMHAS) was formed in 1996, integrating the addiction and mental health treatment systems. Most treatment services are delivered through state-operated clinics and hospitals; remaining services are purchased through contractual agreements with over 130 provider agencies throughout the state.

Connecticut's Office of Planning and Management (OPM) requires that all state agencies include performance measures to monitor contract compliance and effectiveness. CT-DMHAS has historically specified a set of outcomes in each contract, but few process and data quality measures were consistently reviewed and monitored on an ongoing basis, because of the limited scope of statewide collection of relevant data.

In 2006, CT-DMHAS shifted its focus to "value-driven" services, and selected a limited number of measures for reporting, chiefly based on SAMHSA's National Outcome Measures (NOMs) (Substance Abuse and Mental Health Services Administration). These measures were determined to have the potential to help monitor and to improve the quality of care at the provider, local, regional, and state levels. Additionally, CT-DMHAS included adaptations of the WC measures because they were based on service data already collected but not previously analyzed.

What is reported?—The CT-DMHAS measure of "Continuity of Care within 14 Days" is similar to the WC continuity of care measure that requires another service within 14 days after discharge from detoxification, inpatient or residential care. The Connecticut definition differs, however, in requiring that the follow-up service be at a *lower* level of care (e.g., outpatient treatment after discharge from residential treatment). Moreover, continuity of care is calculated separately for consumers who complete treatment prior to discharge versus those who do not. Generally, consumers who complete treatment appear to be more likely to proceed to a less intense level of care than consumers who do not complete treatment (Figure 1). Treatment completion is determined through the use of particular disposition codes upon discharge.

Core measures for substance abuse treatment, including the continuity measure, are reported at the program, provider, regional and statewide levels. Monthly individual program-level reports, which are defined by the level of care (e.g., outpatient treatment) within a provider, are issued to private non-profit providers as well as to state operated facilities. Some providers, particularly the larger private non-profits, may receive CT-DMHAS funding for multiple programs and differing levels of care, and thus may receive a number of program level reports at once. In addition to the program-level reports, CT-DMHAS has begun development of provider-, regional-, and statewide-level report cards. The core measures, including the WC measure will be supplemented by additional indicators such as consumer satisfaction survey results in certain domains, such as access to care.

2.2 Massachusetts

Similar to Connecticut, Massachusetts also focused on a WC continuity of care measure. This state offers an example of a WC measure entering into the state's consideration in planning an incentive-based payment system, although the measure was not, in the end, a part of that system. However, a "continuity of care after detoxification" performance measure that is similar to the WC measure has been included in reports given to each provider and monitored as part of overall provider performance.

History and decision to use the measures—In Massachusetts, the Bureau of Substance Abuse Services (BSAS) is working directly with the providers of detoxification services in the state to develop an incentive-based contracting system. Acute Treatment Services – Detoxification (ATS) is defined in Massachusetts as a medically necessary intervention providing medically monitored detoxification to individuals in acute withdrawal from alcohol and other drugs. Historically, payment for ATS has been on a per-day rate and, since there is a waiting list, there has been no financial incentive at the provider level for

quality improvement efforts that might help prevent clients' needing to return for multiple detoxification episodes.

In 2005, beginning with a state strategic planning process that called for performance-based contracting, BSAS enhanced its administrative data infrastructure to provide client-centric, episode of care data that includes encounter data rather than just admissions data. Also, BSAS developed a collaborative learning environment with each level of care in an effort to foster consensus building on identification and definition of measures and promote sharing of best practices among service providers. This activity takes the form of a comprehensive *Level of Care Management* strategy to address issues of measuring service delivery performance. Following the example set by the ATS group, BSAS also has convened each of the other levels of care including: post-detox stabilization, residential, outpatient, youth treatment, family treatment, case management and has begun to examine what performance management means within its recovery support centers.

In 2007, a planning group on ATS began meeting to outline principles for pay-for-performance initiatives, including the following: goals must be data driven, planning must involve stakeholders, and goals will be measureable with clear and timely rewards. This group reviewed data, conducted site visits and interviews, and developed an incentive-based payment program. Using Fiscal Year (FY) 2007 data on 37,310 episodes in 15 sites, the group reviewed information on length of stay, completion rates and transition after the detoxification. One aspect of the data analysis was related to the WC continuity of care measure of receiving substance abuse treatment within 14 days after discharge from detoxification. For FY 2009, although there was variation across specific treatment sites, among the 37,310 episodes analyzed, overall: 21 % of clients transitioned to substance abuse treatment, 17 % to additional detoxification, and 62 % to neither (Figure 2). However, this analysis showed that with longer lengths of stay in ATS, the proportion transitioning to other treatment increased to about 30 % and the proportion returning to additional detoxification decreased.

What is reported?—For the pay-for-performance trial period that started in July 2008, BSAS and the ATS provider group selected “drop out” rate (left against medical advice) as the performance indicator instead of continuity of care, for several reasons, each related to fairness to providers. First, the ability to transition to treatment may differ across the state because of the general lack of capacity of appropriate post-detoxification services and the geographic inequity of those services. Second, the state could not monitor and include in a measure any transition to programs that do not report data (i.e., self help groups). Finally, detoxification providers can influence retention but even when they make appropriate referrals, they have limited control over whether the client makes a transition to treatment. Nonetheless, the transition to next level of care information, which closely follows the WC measures of initiation and engagement, is included in feedback to each provider.

2.3 New York

New York offers an example of adapting the WC measures when routine data collection does not maintain encounter data, but does include start and end dates and the number of services within each admission to substance abuse treatment. Similar to Connecticut and Massachusetts, New York also incorporated WC measures into ongoing quality improvement activities.

History and decision to use the measures—New York's Office of Alcoholism and Substance Abuse Services (OASAS) has regulatory authority over almost all specialty care substance abuse treatment in the state. About 60 % of programs receive funding through the

OASAS Local Assistance budget, including both state and federal Block Grant funds. For over 14 years NY has had a program-based quality performance measurement system, the Integrated Program Monitoring and Evaluation System (IPMES), developed in collaboration with programs and supported by the Data Integrity Monitoring and Evaluation project (DIME). Under the state law, OASAS shares its responsibility for funding and monitoring services with county-level local governmental units (LGUs). Contracts for services are typically executed by the LGUs, but OASAS annually reviews proposed program budgets against performance indicators. This process often results in corrective action plans to be completed as a condition of continued funding. While OASAS has had a performance monitoring system in place, relatively little attention has been paid to access and early engagement. To address this, 10 % of outpatient programs (approximately 50) in the state have become involved in multi-state quality improvement projects under the umbrella of the Network for the Improvement of Addiction Treatment (NIATX) (McCarty et al., 2007).

What is reported?—Participation in the WC Public Sector Workgroup has helped OASAS begin to develop and implement measures at the county LGU and systems levels using WC measures:

- *Annual Statewide Plan.* State-level performance indicators are now reviewed annually in New York's Statewide Comprehensive Plan Update which includes measures of engagement and continuity (<http://www.oasas.state.ny.us/pio/documents/5YrPlan2009-2013.pdf>).
- *County/LGU.* An ongoing effort to develop a performance system for counties/LGUs now incorporates WC-based measures of engagement and continuity after crisis and inpatient services. County service directors are involved in testing and continued development. County profiles have been published in OASAS online County Planning System. The County/LGU score card includes National Outcome Measures (NOMS) and NY specific measures such as "percent linked to next level of service", "initial engagement rate," and "continued engagement rate." The definition of engagement varies by service type; for instance, for outpatient treatment programs four treatment visits, similar to the WC outpatient engagement measure, would be considered initial engagement while 10 visits would be considered continued engagement.
- *State Web Application.* As part of the NAITx efforts aimed at providers, NY has incorporated adaptations of the WC measures into a new web application called Strengthening Treatment Access and Retention – Quality Initiative (STAR-QI). NY collaborated with providers to develop STAR-QI as an adjunct to the current NY state Client Data System (CDS) web application based on the Treatment Episode Data Set (TEDS) admission and discharge information. STAR-QI is a hybrid of the CDS/TEDS data systems (implemented in 1990) blended with the new initiative to also collect some treatment encounter service dates. The STAR-QI effort collects up to the fourth service after admission to track program change projects and gives immediate real-time feedback on a number of process improvement indicators. The state used a change project model with implicit feedback loops from providers and related stakeholders to ensure that STAR-QI met stakeholder and provider needs. Providers using STAR-QI can monitor and track access, early engagement and retention measures within their programs. It was important to NY State to tie STAR-QI to the existing CDS/TEDS data elements and to develop indicator reports that met NIATx goals and aims while allowing for development and evaluation of measures that have a common conceptual basis with the WC measures, such as "Percent of Admissions with 4 or More Services Within 30 Days" which is closely related to the WC engagement measure. Inclusion of the data elements in the hybrid

system allows for continued development and further evaluation of WC measures. STAR-QI includes over 45 real-time graphical reports for monitoring performance trends (see an example in Figure 3) including “Percent of Admissions with 4 or More Services Within 30 Days,” “Number of Clients Completing Third Date of Service within 30 Days,” “Percent of First Assessments Resulting in Admission” and “Average Days from First Assessment to Admission.”

- *Program Scorecards.* Most recently, New York has begun development of program-level scorecards which are an integral component of the effort to define a “gold standard” of care. These provide ratings on 23 indicators covering access, quality, outcome, efficiency and compliance, including measures of engagement and continuity.

2.4 North Carolina

While the reporting in Massachusetts, Connecticut and New York currently is limited to providers, North Carolina’s information is available on a website that is open to the public. North Carolina offers an example of a state that includes WC measures in quarterly reporting under a legislative mandate for state system performance measures.

History and decision to use the measures—In North Carolina, 24 Local Management Entities (LMEs) play an intermediary role between the Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DMHDDSAS) and substance abuse treatment providers. In 2006, the General Assembly of North Carolina passed a legislative mandate that the state measure and report performance of treatment providers and develop report cards, targets for achievement, and accessible formats for public reporting. It is important to note the difference between “targets” and “standards.” Targets are intended to be achievable levels of performance that are specific to each process improvement measure, levels that LMEs will meet by the end of the year. These targets can be changed on an annual basis. In addition, there are standards within the state’s contracts with LMEs that have been established as minimum thresholds of performance that LMEs need to reach routinely throughout the year.

What is reported?—Among the 21 process measures that are reported in the LMEs’ contracts and for which there are statewide targets and minimum standards, two are directly related to WC measures – timely initiation and timely engagement – while others are indirectly related including community follow-up treatment entry within 7 days of after discharge from the state’s three state-operated alcohol and drug abuse treatment centers and the four state operated psychiatric hospitals that also may be involved in the care and treatment of substance abuse clients. These are calculated for persons who have received any services paid through Medicaid and/or the Integrated Payment and Reporting System (IPRS) federal block grant and state funds through the Division’s Unit Cost Reimbursement (UCR) system. Thus, the WC measures also are applied to treatment for mental health problems and developmental disabilities, although originally developed only for substance abuse.

The Washington Circle “Timely Initiation and Engagement of Individuals in Service (Substance Abuse)” and other critical statewide performance measures are reported across three disability groups in the Division’s quarterly reports under the title of “Community Systems Progress Reports” (<http://www.ncdhhs.gov/mhddsas/statpublications/reports/index.htm>). Over 14 quarters of data collection and analysis can be scanned, including the accompanying appendices and matrices that are intended to easily provide a portrait, by individual measure, to review progress for each LME and by each county by reporting quarter. The data presented offers a

detailed portrait of changes over time, with notable variations by measure, LME, quarter and year, usually based on a wide variety of internal and external influences. Figure 4 shows this information on an overall state level.

Benchmarking has been more challenging, however, because no reliable established public sector standards exist across the states, and there has been wide variation in performance across the 24 LMEs. Thus, the Division has adopted a pragmatic state average benchmark standard for each state fiscal year, based on the immediate prior year's statewide performance. This standard has served to initially establish and promote relatively modest and attainable levels of performance for the highest level performing LMEs, while continuing to challenge and gradually edge forward LMEs that are having more difficulty in achieving satisfactory levels of system performance.

The Division has also established an incentive called "Single Stream Funding" which provides more flexibility at the local level to highly performing LMEs. The 21 performance measures in the Community Systems Progress Report have served as one of several essential criteria for receiving and maintaining Single Stream Funding status, and thus have brought more focus to the importance of performance in achieving this status.

Effective in December, 2008 the Division has posted its "*Outcomes at a Glance*" online dashboard, although this dashboard does not include the WC measures. Using real-time data from the NC-TOPPS client outcomes system, the outcomes dashboard allows the public, including key stakeholders, to view and print graphs showing current State and LME information on SAMHSA's National Outcome Measures (NOMs) for substance abuse and mental health clients including alcohol and drug use, employment, homelessness, and clients' perceptions of the helpfulness of the program in improving the quality of their lives during treatment. Access to the dashboard is available on the NC-TOPPS homepage at <http://www.ncdhhs.gov/mhddsas/nc-topps/> and under the icon "*Outcomes at a Glance*." North Carolina currently is finalizing a web-based provider-level query system for these measures.

2.5 Oklahoma

Like other states that focus on reporting to providers, Oklahoma offers an example of the entire set of WC measures being incorporated as part of several generations of reports to providers. Also, as in North Carolina, some information is available to the public, and as in Connecticut, Oklahoma has worked directly with providers to improve the quality of data reporting.

History and decision to use the measures—The Oklahoma Department of Mental Health and Substance Abuse Services (ODMHSAS) has had a robust behavioral health reporting system for many years. Currently, providers report through a web-based system on detailed client characteristics and service information for every substance abuse (and mental health) treatment client served with state funding. Beginning in 1992, ODMHSAS compiled its first behavioral health report card, guided by the department leadership's desire for a data-driven, decision-making process. Since then, the department's performance monitoring reports have gone through several iterations.

The "evolution" of performance monitoring has been sustained by a stable data analysis unit that has had the benefit of being involved in many federally funded multi-state projects and gained knowledge from other states' efforts. The aim of the original Regional Performance Management Report (RPM) in 2003 was to provide up-to-date information to eight regions on a quarterly basis to guide system performance improvement. This effort followed the Plan-Do-Study-Act (PDSA) model for performance improvement activities, a model

adopted through the state's NIATx initiative (McCarty et al., 2007). The indicators for the report were "planned" with federally funded technical assistance. To "do" the report, ODMHSAS Decision Support Services compiled data quarterly and added narrative with input from the Department's Clinical Services Director and Performance Improvement Coordinator. This draft report was circulated among ODMHSAS administrators and then distributed to all substance abuse service providers for their input. The "study" step of the process began to stimulate an informative exchange of ideas to explain regional differences. Finally, the "act" step encouraged provider agencies performing above the benchmark to share their methods and experiences with those performing below the benchmark on an indicator to implement a plan of correction to improve performance.

The goal for each indicator was a half standard deviation above the state mean, while those agencies performing a half standard deviation or more below the state mean were asked to submit a plan of correction. An example of the corrective plans is the implementation of a follow-up monitoring system to improve continuity of care. Clients discharged from a residential facility received either a letter or a phone call 14 and 30 days after discharge to determine whether the clients had made contact with the outpatient facility they had been referred to and to encourage them to do so if they had not connected to outpatient continuing care. Providers' changes were monitored each quarter to determine whether they were having the desired effect. The RPM reports were posted on the department's public website and were available to the general public.

While the RPM report was being developed, ODMHSAS analytical staff worked with other states and with researchers from Brandeis University to pilot test process measures and adapt them for substance abuse treatment in the public sector. Previously, ODMHSAS had focused on outcomes, matching data from other state agencies to determine whether the clients were employed and staying out of the criminal justice system at one-year post-discharge and beyond. However, a key drawback was reduced timeliness of the findings because often two years elapsed following the client's discharge before the data were matched, analyzed and reported back to the treatment providers. Reports described past performance but with little potential for use in quality improvement efforts. Due to the lag time involved with outcomes indicators, the ODMHSAS concluded that process indicators that would give immediate feedback for continuous quality improvement were needed. Using the WC process measures, ODMHSAS did not have to wait until the client had been discharged for a significant amount of time to determine success. Within 44 days of admission, it was apparent whether the client had initiated and engaged in the treatment process. The WC measures were calculated separately by different levels of care and used as the basis for substance abuse treatment performance monitoring in the RPM report.

What is reported?—One difference between the way the measures were calculated in the RPM and by the WC is that no "service free period" was used in the Oklahoma-specific reports. As noted earlier, the general specifications for the WC measures for initiation and engagement are to include only those clients starting a new treatment episode for either OP or IOP as marked by an index visit that is preceded by a 60-day service-free period. ODMHSAS was less interested in whether this was a new episode or a continuation of an episode and held the same expectation of initiation and engagement for each new outpatient admission. Another difference is that ODMHSAS counts mental health services as valid follow-up services for SA treatment because many clients have co-occurring mental disorders and mental health services may be the most appropriate treatment. If WC indicators are collected in the future for national benchmarks, Oklahoma has the capacity to conform indicator calculations to a national standard, but at present, state priorities prevail.

When the RPM report was distributed, providers began to see how the process measures could relate to treatment outcomes. Upon learning how many clients were leaving treatment before it could have an impact on their lives (only 59% of clients were initiating treatment and 39% were engaging in treatment), and with encouragement from ODMHSAS leadership, provider agencies began to take actions to improve these trends, such as conducting calls with the client and referral agency staff before discharge. In the eight quarters studied, the overall state rate of initiation in outpatient treatment rose nearly 10%, from 59% to 69%.

Beginning in fiscal year 2007, ODMHSAS again modified its performance monitoring report to better meet stakeholders' needs. The format was changed so that every indicator was reported for an agency on one page for an easy, overall assessment of its performance. The Provider Performance Monitoring Report (PPMR) incorporated the National Outcome Measures (NOMS), while keeping the WC process measures as important indicators of why an agency was or was not achieving the desired outcome results. A provider agency is now given its score compared to the state average for each measure, as well as its ranking with similar providers, which quartile it falls in, and its past year's performance. Easy-to-understand graphics (such as smiley faces and thumbs up) accompany each measurement type to graphically represent relative performance on the measure Oklahoma Department of Mental Health and Substance Abuse Services, 2011. The PPMR is available to providers through a secure website, is interactive, and can be compiled for whatever time period the user chooses. An example of one graph that providers can view that shows their outpatient initiation rate over time on a quarterly basis compared to rates throughout the state is given in Figure 5.

3. DISCUSSION

The WC measures provide states with a set of tools that have been developed by a collaborative interstate team with strong Federal support. States can incorporate them into their efforts to transform routinely collected data into information that can guide treatment service planning for substance use disorders. Each state's experience offers lessons for any state that might be contemplating beginning to use the WC measures or to make changes in its ongoing use of the measures.

Across the country, state substance abuse and mental health agencies share an overall common goal of delivering services to prevent and/or treat the misuse of alcohol, tobacco, and other drugs, and supporting recovery from substance use disorders. Also, providers in all of the states described here also participate in some aspect of NIATx projects. Yet the contexts in which they operate differ across the country in terms of a range of factors including local need for treatment services, resources, data infrastructure and philosophy.

It is not surprising, therefore, that the use of the WC measures differs across states. For example:

- North Carolina and Oklahoma use them as performance targets in contracts and report them publicly.
- Massachusetts reports continuity after detoxification to providers participating in a pay-for-performance demonstration, although the WC measure is not part of establishing payment rates.
- Oklahoma, Connecticut, and New York use them for reporting to providers with the goal of supporting providers' quality improvement efforts.

3.1 Common Themes Related to Adoption and Sustainability of Washington Circle Measures

Despite important differences among the five states profiled here, important common themes emerge related to performance measurement in general and the use of WC measures in particular.

Leadership and staff—A key common element is the requirement that state directors of the substance abuse agencies within Departments of Health or Human Services be invested in: developing performance measures, calculating and interpreting the measures, using these measures in performance management, and defending allocation of resources to support implementation and sustainability of performance management efforts in an atmosphere of competing demands on limited resources. Additionally, states need staff with technical and communication skills, understanding of the WC measures and how they complement other state initiatives, and ability to realistically assess their capacity to adopt and sustain measurement.

Efforts to incorporate WC performance measures will not succeed unless these agency leaders and staff recognize the potential of using the WC measures to enhance states' ongoing activities or quality improvement initiatives. After initial interest, performance measurement efforts in general, and the inclusion of the WC measures in particular, will not be sustainable unless: a state agency's culture is supportive of quality improvement, the initial state agency internal champions are supplemented by broader support from legislators, other state agencies and provider groups who see the value of joining together to create a culture of quality improvement, and performance measurement becomes firmly established within the state's routine operations. Linkage of each state's effort to larger trends, including the use of provider incentives related to quality and performance, will help to ensure that the performance measures are the focus of stakeholder interest.

Evolution of specification and use of measures over time—The WC measures require ongoing re-evaluation both in terms of their specifications and also in terms of their applications over time. At the outset, considering adoption of performance measures needs to include the following steps:

- Assessing the applicability of performance measures for a state's particular needs,
- Adapting performance measures to a state's specific data infrastructure and provider reporting capabilities
- Establishing ongoing reporting, monitoring and change processes.

The time required for this process will vary depending on whether this is an entirely new effort or if specific new measures are being added to an existing system.

Moreover, measurement is not a static activity. The measure specification can change as new approaches to treating substance use conditions are disseminated (e.g., using medication assisted treatment), the quality of information improves (e.g., more detailed treatment information with the anticipated proliferation of electronic health records, Health Information Exchanges and Personal Health Records), and new evidence is reported on the association of the WC measures with improved outcomes. In addition, the context in which the specific measures are used also needs to be re-evaluated to assess if the ways the measures are being used continues to be useful for providers and funders. With the passage of time, new measures may be substituted for those that reach a ceiling as progress is made toward improvements. Moreover, as data systems become more sophisticated, more detailed reporting is possible, as illustrated by Oklahoma which began with simple regional reports

in 2003 and today has reports on an individual provider basis and with statewide and time trended comparisons.

State-specific adaptation of the WC measure specifications—While some states use the measures exactly as specified by the WC, others have made modifications, while staying close to the concept underlying the measure. For example:

- Connecticut requires the follow up for the continuity measures to be at a “lower level” of care.
- Oklahoma includes mental health treatment as a valid follow-up service for SA treatment measures and does not check to see whether an outpatient service is the start of a new episode.
- New York uses measures as specified by NIATx which are conceptually related to the WC measures, but do not have the same time frame requirement of 14 days for initiation after outpatient services.

In each case, the state maintained the basic concepts, but adjusted the specifications to match their data availability and to make the measure meaningful and manageable in their own context.

Collaboration with academic and technical consultants, state partners, and providers—Working with others who are developing common measures can accelerate reporting system development and improvements. The WC Public Sector Workgroup, supported by CSAT, has provided a venue for state participants to share data collection, analysis, and reporting protocols; pose questions and receive answers to questions regarding barriers to developing provider consensus and participation; and collaborate to establish standards that other states can use for performance measurement and reporting. Avoiding the pitfalls encountered by others is particularly valuable. Each state recognized that it would be key to include providers in efforts to improve the buy-in to the performance measure they were developing because any successful evaluation or quality improvement effort will involve key stakeholders. Use of the WC measures is no exception. The state agency also needs to offer ongoing assistance to providers on a range of topics including how information in reports can be interpreted and used for performance monitoring. Oklahoma and Connecticut do these activities with providers on an ongoing basis. This support needs to take into account the other training and assistance that many providers get from the Substance Abuse and Mental Health Services Administration and it also needs to be sensitive to the constraints on providers’ time. Presentation of data needs to be an iterative process with openness to questions, concerns and suggestions about the data, measures, and reports. Thus, state agency staff need to be alert to ways to make the dissemination of reports and training materials more efficient and effective by taking advantage of new web-based technologies such as web reporting services and e-learning to reduce the burden on users and approaches to learning such as learning collaboratives so that users can share their knowledge and experience.

Also including academic partners may bring not only the credibility of “experts” to the development of measures, but also a broader perspective about how to assess alternate approaches to measurement and explore what client, community, or treatment program factors might influence results. In one state, Massachusetts, a close working relationship with academic partners in the area led to the development of a pay-for-performance model in their Acute Treatment Service (detoxification) system, securing funding to present results at national conferences and collaborating to undertake additional research projects that include performance measures. In another state, Oklahoma, academic partners consulted on the early adoption of the WC measures and their adaptation to a state environment.

Inclusion of WC measures in the context of other initiatives—All states included WC measures in the context of other initiatives, either in terms of ongoing quality improvement efforts, such as NIATx, or reporting with additional nationally-developed or locally-developed measures. By including a range of measures, states can track if improvement in some measures comes at the expense of other aspects of substance abuse treatment.

One prominent example is the Substance Abuse and Mental Health Services Administration's (SAMHSA) ten National Outcome Measures (NOMs) domains, including the following outcomes for substance abuse treatment: abstinence, employment /education, criminal justice, stability in housing, social connectedness and retention in treatment. These domains and their associated measures have been developed and are reported annually by states in their Substance Abuse Prevention and Treatment Block Grant Application. These reports enable SAMHSA and the States to assess and monitor the performance of services for substance abuse treatment, substance abuse prevention, and mental health. By measuring and reporting on initiation and engagement, states can contribute to improving the NOM for increased retention in treatment by offering information that will allow them to target providers, populations, or levels of services. Many studies of treatment retention indicate that substance abuse clients who remain in treatment for a longer duration of time have better outcomes (Hubbard, Craddock, Flynn, Anderson, & Etheridge, 1997; Hubbard et al., 2003; McLellan, 1997; Simpson, 1995) including employment, (Arria & TOPPS-II Interstate Cooperative Study Group, 2003; Koenig et al., 2005; Luchansky, Brown, Longhi, Stark, & Krupski, 2000; Wickizer, Campbell, Krupski, & Stark, 2000; Zarkin et al., 2002) criminal justice involvement, (Hubbard et al., 2003; Luchansky, He, & Longhi, 2002; Luchansky, Krupski, & Stark, 2007; Luchansky et al., 2006) level of functioning, (Conners, Grant, Crone, & Whiteside-Mansell, 2006; McLellan, 1997) and reduced substance use (McLellan, 1997).

In recent research studies, the WC measures have been related to the outcome measures covered in the NOMs. For example: meeting the initiation and engagement criteria is associated with decreased criminal justice involvement (Garnick et al., 2007); engagement is associated with significant improvements in the alcohol, drug and legal composite scores from the Addiction Severity Index among Veterans Affairs (VA) patients (Harris et al., 2008) and the WC continuity of care after residential treatment for adolescents is associated with recovery status at follow-up (Garner, Godley, Funk, Lee, & Garnick, 2009). Therefore, it is not surprising that as states work on improving their NOMs scores, states that report to providers generally include both the WC measures and NOMs in the reports. Oklahoma, Connecticut and New York report the WC measures on a provider level in the context of reports that also are focused on the NOMs measures.

Reporting to providers and the public—Reports to the general public have become common over the last decade for hospitals, nursing homes and managed care plans. Transparency, that is giving stakeholders open access to information about programs and processes, is a popular theme in many public activities today. Indeed, through the NCQA, substance abuse treatment initiation and engagement are reported publically for both private and Medicaid managed care plans (National Committee for Quality Assurance, 2007). Most of the five states profiled here are now focusing their reporting of WC substance abuse performance measures for providers through secure websites and provider-focused reports. However, all five states are moving in the direction of public reporting, with some states still in the process of working on the reliability and validity of measurement before publically reporting. Currently, North Carolina and Oklahoma make their data available to the public through the agencies' public websites and New York and North Carolina are developing report cards that will be reported to the general public.

Data and resource requirements—In order to launch performance measurement efforts, states need to be at a stage of having sufficient data quality and commitment to using their administrative data. To use the WC measures, states generally need to have:

- Statewide unique client ID to permit data linkage
- Data quality standards to facilitate the consistent cross-site metrics necessary for comparable indicator development and for peer-to-peer learning
- Data that includes type of service, dates of service, amounts of service and level of care
- Plans to promote providers familiarity with interpreting and using data for performance management.

Development of this data infrastructure and reporting performance measures requires state resources. In fact, resource requirements for the inclusion of WC measures in a performance measurement system are relatively low once the initial software development is done and once a linked admission and encounter database is in place. Ongoing support will be needed, however, to ensure that a State's performance management system stays current with new approaches to reporting data on a flexible and "real time" basis and that support is available to ensure that data is reported accurately. Moreover, Federal funding for Block Grant reporting along with SAMHSA's technical assistance program can be used to support data infrastructure development and maintenance of data analysis staff to produce performance outcomes reports. Nonetheless, competing demands for limited resources are a constant reality. There is an ongoing tension between devoting more resources to the provision of treatment or to allocating resources for the state-agency programmer and analyst staff who are essential to support performance management systems and reporting. The business case for continuing this allocation of resources can and must be made through documentation and publication of the system and service recipient improvements made by utilizing WC measures, although it may be difficult to isolate the impact of WC measures in light of multiple simultaneous initiatives (e.g., NIATx or reporting NOMs).

4. CONCLUSION

It is important to consider the WC measures in the context of broad performance measurement and improvement strategies. The WC measures focus on processes of treatment, and on the timing and types of treatment services that can be acted on in a timely manner and relate to client-focused outcomes (e.g., the clients', providers', states' and SAMHSA's ultimate goals). The broad applicability and utility of the WC measures for performance improvement, pay-for-performance, monitoring, inclusion in electronic health records and other initiatives underlines the soundness of the design of these measures as tools for substance abuse service delivery systems.

The WC measures form only part of the picture, however. These measures target the initial steps in an individual's treatment and recovery process. Therefore, they are necessary but not sufficient performance measures when substance use disorders are viewed as chronic conditions for many clients, i.e., conditions that require ongoing care. In a recent review, McKay and colleagues report that there is convincing evidence that continuing care, defined as treatment following an initial episode of more intensive care, can be effective in sustaining the positive effects of the initial phase of care (McKay, 2009). Further work is needed to parallel the relevant measures used for management of other chronic conditions such as diabetes and hypertension.

Also, the WC measures only focus on treatment, while SAMHSA's recently developed model of Recovery Oriented Systems of Care (ROSC) places treatment for substance use conditions as only one element in a broader framework. To maximize outcomes within that framework, multiple systems (e.g., treatment/recovery, family, medical, housing/homeless, child welfare, criminal justice, educational) need to be integrated to offer a fully coordinated menu of services and supports (Addiction Technology Transfer Center Network, 2008).

The five states reported on here – Connecticut, Massachusetts, New York, North Carolina, and Oklahoma – have worked along with other states over the past five years to conceptualize, specify and pilot test a common set of performance measures (Garnick, Lee, Horgan, Acevedo et al., 2009). Each state has used these measures differently, based in part on the state's involvement with other ongoing quality improvement initiatives and the state's selection of which issue to target for attention. As additional states adopt some of the WC measures, we anticipate that they also will develop their own unique implementations based on their particular needs. We anticipate that states that were the earlier users of the WC measures, along with those that are more recent adopters, will continue to improve the measures, to shape them to be more responsive to states' needs, and to learn from each other.

Acknowledgments

This project was supported by the Substance Abuse and Mental Health Services Administration (partly through a supplement to the Brandeis Harvard National Institute on Drug Abuse (NIDA) Center on Managed care and Drug Abuse Treatment, Grant # P50 DA 010233). The authors appreciate the valuable insights from members of the Washington Circle Public Sector Workgroup (Terri Anderson, Hermik Babakhanlou-Chase, Astrid Beigel, Albert Bidorini, Kevin Campbell, Fran Cotter, Daniel Crough, Margaret Dillon, Sarah Duffy, Robert Dunigan, Katherine Fornili, Alex Harris, Rick Harwood, Craig Anne Heflinger, Alice Huber, Frank McCorry, Kay Miller, Gaylene Nevers, Kathleen Rebbert-Franklin, Mark Reynolds, Robert Saunders).

REFERENCES

- Addiction Technology Transfer Center Network. The Shift to Recovery-Oriented Systems of Care. 2008. from <http://www.nattc.org/learn/topics/rosc/>
- Arria A. TOPPS-II Interstate Cooperative Study Group. Drug treatment completion and post-discharge employment in the TOPPS-II Interstate Cooperative Study. *Journal of Substance Abuse Treatment*. 2003; 25(1):9–18. [PubMed: 14512103]
- Conners NA, Grant A, Crone CC, Whiteside-Mansell L. Substance abuse treatment for mothers: treatment outcomes and the impact of length of stay. *J Subst Abuse Treat*. 2006; 31(4):447–456. [PubMed: 17084800]
- Etheridge RM, Craddock SG, Hubbard RL, Rounds-Bryant JL. The relationship of counseling and self-help participation to patient outcomes in DATOS. *Drug Alcohol Depend*. 1999; 57(2):99–112. [PubMed: 10617095]
- Garner BR, Godley MD, Funk RR, Lee MT, Garnick DW. The Washington Circle continuity of care performance measure: Predictive validity with adolescents discharged from residential treatment. *Journal of Substance Abuse Treatment*. 2009; 38(1):3–11. [PubMed: 19553067]
- Garnick D, Lee M, Horgan C, Acevedo A. the Washington Circle Public Sector Workgroup. Adapting Washington Circle Performance Measures for Public Sector Substance Abuse Treatment Systems. *Journal of Substance Abuse Treatment*. 2009; 36:265–277. [PubMed: 18722075]
- Garnick DW, Horgan CM, Chalk M. Performance measures for alcohol and other drug services. *Alcohol Res Health*. 2006; 29(1):19–26. [PubMed: 16767849]
- Garnick DW, Horgan CM, Lee MT, Panas L, Ritter GA, Davis S, et al. Are Washington Circle performance measures associated with decreased criminal activity following treatment? *J Subst Abuse Treat*. 2007; 33(4):341–352. [PubMed: 17524596]

- Garnick DW, Lee MT, Chalk M, Gastfriend D, Horgan CM, McCorry F, et al. Establishing the Feasibility of Performance Measures for Alcohol and Other Drugs. *Journal of Substance Abuse Treatment*. 2002; 23:375–385. [PubMed: 12495800]
- Garnick DW, Lee MT, Horgan CM, Acevedo A. Adapting Washington Circle performance measures for public sector substance abuse treatment systems. *J Subst Abuse Treat*. 2009; 36(3):265–277. [PubMed: 18722075]
- Gossop M, Trakada K, Stewart D, Witton J. Reductions in criminal convictions after addiction treatment: 5-year follow-up. *Drug Alcohol Depend*. 2005; 79(3):295–302. [PubMed: 16102373]
- Harris AH, Humphreys K, Bowe T, Tiet Q, Finney JW. Does Meeting the HEDIS Substance Abuse Treatment Engagement Criterion Predict Patient Outcomes? *J Behav Health Serv Res*. 2010; 37(1):25–39. [PubMed: 18770044]
- Harris AH, Humphreys K, Finney JW. Veterans Affairs facility performance on Washington Circle indicators and casemix-adjusted effectiveness. *J Subst Abuse Treat*. 2007; 33(4):333–339. [PubMed: 17400416]
- Hubbard R, Craddock S, Flynn P, Anderson J, Etheridge R. Overview of 1-year follow-up outcomes in the Drug Abuse Treatment Outcome study (DATOS). *Psychology of Addictive Behaviors*. 1997; 11(4):261–178.
- Hubbard RL, Craddock SG, Anderson J. Overview of 5-year followup outcomes in the drug abuse treatment outcome studies (DATOS). *J Subst Abuse Treat*. 2003; 25(3):125–134. [PubMed: 14670518]
- Koenig L, Siegel JM, Harwood H, Gilani J, Chen YJ, Leahy P, et al. Economic benefits of substance abuse treatment: findings from Cuyahoga County, Ohio. *J Subst Abuse Treat*. 2005; 28 Suppl 1:S41–S50. [PubMed: 15797638]
- Institute of Medicine. Improving the Quality of Health Care for Mental and Substance Use Conditions. Washington, DC: The National Academies Press; 2006.
- Luchansky B, Brown M, Longhi D, Stark K, Krupski A. Chemical dependency treatment and employment outcomes: results from the 'ADATSA' program in Washington State. *Drug Alcohol Depend*. 2000; 60(2):151–159. [PubMed: 10940542]
- Luchansky, B.; He, L.; Longhi, D. Substance Abuse Treatment and Arrests: Analyses from Washington State, DSHS Research and Data Analysis Division Fact Sheet 4.42. Seattle, WA: Washington State Department of Social and Health Services; 2002. Document Number
- Luchansky B, Krupski A, Stark K. Treatment response by primary drug of abuse: Does methamphetamine make a difference? *J Subst Abuse Treat*. 2007; 32(1):89–96. [PubMed: 17175402]
- Luchansky B, Nordlund D, Estee S, Lund P, Krupski A, Stark K. Substance abuse treatment and criminal justice involvement for SSI recipients: results from Washington state. *Am J Addict*. 2006; 15(5):370–379. [PubMed: 16966193]
- Mark T, Levit K, Vandivort-Warren R, Coffey R, Buck J. the Substance Abuse and Mental Health Services Administration (SAMHSA) Spending Estimates Team. Trends in Spending for Substance Abuse Treatment, 1986–2003. *Health Affairs (Millwood)*. 2007; 26(4):1118–1128.
- McCarty D, Gustafson DH, Wisdom JP, Ford J, Choi D, Molfenter T, et al. The Network for the Improvement of Addiction Treatment (NIATx): Enhancing access and retention. *Drug Alcohol Depend*. 2007:138–145. [PubMed: 17129680]
- McCorry F, Garnick DW, Bartlett J, Cotter F, Chalk M. Developing performance measures for alcohol and other drug services in managed care plans. *Joint Commission Journal on Quality Improvement*. 2000; 26(11):633–643. [PubMed: 11098426]
- McKay JR. Continuing care research: what we have learned and where we are going. *J Subst Abuse Treat*. 2009; 36(2):131–145. [PubMed: 19161894]
- McLellan, A. Evaluating effectiveness of addiction treatments: reasonable expectations, appropriate comparisons. In: Egertson, J.; Fox, D.; Leshner, A., editors. *Treating Drug Abusers Effectively*. Malden MA: Blackwell Publishers; 1997. p. 8–40.
- McLellan AT, Chalk M, Bartlett J. Outcomes, performance, and quality: what's the difference? *J Subst Abuse Treat*. 2007; 32(4):331–340. [PubMed: 17481456]

- National Committee for Quality Assurance. The State of Health Care Quality 2007. Washington, D.C.: National Committee for Quality Assurance; 2007. Document Number
- National Committee on Quality Assurance. HEDIS 2008 Technical Specifications. Washington, D.C.: 2008. (www.ncqa.org). Document Number
- North Carolina Department of Health and Human Services. Raleigh, North Carolina: Division of Mental Health, Developmental Disabilities, and Substance Abuse Services; 2006. MH/DD/SAS Community Systems Progress Indicators: Report for First Quarter SFY 2006–2007. http://www.ncdhhs.gov/mhddsas/statpublications/reports/cspireport_sfy07q1_11-15-06.pdf. Document Number
- Oklahoma Department of Mental Health and Substance Abuse Services. Regional Performance Management Report, Report for Second Quarter of FY 2006. Decision Support Services, Oklahoma City, Oklahoma; 2006. (<http://www.odmhsas.org/eda/rpm/okrpmfy2006q2.pdf>). Document Number
- Oklahoma Department of Mental Health and Substance Abuse Services. Outcome Monitoring Reports. 2011. Retrieved 1/4/11 from <http://www.odmhsas.org/eda/reports/index.htm>
- SAMHSA. Treatment Episode Data Set (TEDS): 1994–2004 National Admissions to Substance Abuse Treatment Services. Rockville, MD: Substance Abuse and Mental Health Services Administration, Office of Applied Studies; 2006. Document Number
- Simpson D. Client engagement and change during drug abuse treatment. *Journal of Substance Abuse Treatment*. 1995; 7:117–134.
- Simpson DD, Joe GW, Broome KM, Hiller ML, Knight K, Rowan-Szal GA. Program diversity and treatment retention rates in the Drug Abuse Treatment Outcome Study (DATOS). *Psychology of Addictive Behaviors*. 1997; 11(4):279–293.
- Wickizer TM, Campbell K, Krupski A, Stark K. Employment outcomes among AFDC recipients treated for substance abuse in Washington State. *Milbank Q*. 2000; 78(4):585–608. [PubMed: 11191450]
- Zarkin GA, Dunlap LJ, Bray JW, Wechsberg WM. The effect of treatment completion and length of stay on employment and crime in outpatient drug-free treatment. *J Subst Abuse Treat*. 2002; 23(4): 261–271. [PubMed: 12495788]

Figure 1.
Connecticut - Continuity of Care Rates for Substance Abuse Consumers Discharged from Treatment (Inpatient, Residential, and Partial Hospitalization/Intensive Outpatient services) during State Fiscal Year 2009

Figure 2.
Massachusetts—Analysis of Transition After Detoxification Data

Figure 3.
New York Example of Early Engagement Report in STAR-QI Web Application

Figure 4.
North Carolina – Substance Abuse Engagement in Substance Abuse Services

Report#: SA190T

Outpatient Initiation-Trend Line

Outpatient Initiation for Individuals Discharged/Level of Care Change Between for the last Twelve Quarters

Agency: (934) GATEWAY TO PREVENTION/RECOVERY

Level of Care: Outpatient

Contract Source: All Substance Abuse Contract Sources (PPMR)

Age Group: Adults (18+)

Figure 5.
Oklahoma—Outpatient Initiation Trend line