

# PROMISING PRACTICES IN HOME AND COMMUNITY-BASED SERVICES

## Lessons Learned from Using a Health Information Technology Program that Combines Claims-Level Data with Service-Level Data

Outcome data in the treatment of mental health and substance use are scarce, making quality improvement difficult. This report describes how Medicaid claims data can be combined with service-level data to improve the quality and cost-effectiveness of services provided in community mental health centers (CMHCs). It describes how CMHCs in three States have used a particular system, Service Process Quality Management (SPQM), to improve quality and achieve cost savings.

### Introduction

Continuous quality improvement (CQI) is perhaps nowhere more challenging than in mental health and substance use disorders (MH/SU) care, where outcomes data tend to be scarce, and where systems for tracking the delivery of services are often less well-developed than in other areas of health care. The lack of information makes it difficult for providers to determine whether they are delivering quality services in a cost-effective

*Outcomes data are scarce in mental health and substance use (MH/SU) care.*

manner. Increasingly, community mental health centers (MHCs) must pay close attention to their costs, for two reasons. First, many centers have transitioned from a

grant-based program to a fee-for-service (FFS) or managed care program. Second, many MHCs face growing competition from for-profit competitors. To remain viable, MHCs must deliver high-quality care in a cost-effective fashion.

This brief explores the approaches of three States to using health information technology for CQI within the MHC system. The brief illustrates how claims-level data can be supplemented with service-level data to allow providers, State agencies, and other organizations to ask detailed questions that improve the quality and efficiency of care and lead to meaningful organizational change. All

three State systems use the same information system, SPQM (Service Process Quality Management), a product of MTM Services. The content of this brief is based on interviews with State directors, the creator of SPQM, and the leaders of agencies that have implemented the system.

### Background

A careful analysis of Medicaid claims data can reveal much about the costs of mental health treatment – for example, whether the services that consumers receive are appropriate for their diagnoses, or whether the costs of treating a given diagnosis vary by region within a State. However, Medicaid claims also omit information that is essential to develop an informed understanding of MH/SU care. For example, although claims data are associated with time ranges, they lack information about the precise length of individual encounters – information that is especially important in MH/SU care settings. In addition, Medicaid (along with other payers) often will not reimburse the delivery of certain services unless they are billed under a physician's provider number, even when the physician did not supply that service (e.g., when a registered nurse administers drugs). Thus, claims data can mask the identities of individual staff. Claims also omit individual attributes that may impact the care that patients receive, as well as the types of outcomes they experience. Among these attributes are ethnicity, region of residence (e.g., urban versus rural), and referral

pathway (e.g., by physician or by the legal system).

MHCs frequently treat individuals who are economically disadvantaged, but who do not qualify for Medicaid. However, some of these individuals will become eligible over time. Indeed, many economically disadvantaged individuals move in and out of eligibility (often because of changed economic circumstances).

*Combined with claims data, service data can reveal much about medical history and practice variance.*

Moreover, some individuals who remain Medicaid-eligible may let the certification of their eligibility lapse (e.g., because they are homeless and lack a way to receive mail).

MHCs sometimes elect to pay for a patient's care using grant monies even when the consumer could receive services through Medicaid. Thus, Medicaid data alone provide information on relatively narrow slices of an individual's medical history – namely, when he or she is certified to be Medicaid-eligible, and when his or her service providers bill to Medicaid.

Information regarding diagnoses and episodes of treatment that occur in MHCs but are not paid for by Medicaid may be vital for understanding the quality of care a consumer has received, as well as the relationships among diagnoses, treatment patterns, and prognoses. When combined with Medicaid data, service-level data (independent of payer) can provide a more comprehensive picture of a consumer's medical history, and, more broadly, of service delivery patterns in a given MHC. In general, Medicaid claims data alone are necessary but not sufficient to answer important questions about practice variance in MH/SU care settings.

### Service Process Quality Management (SPQM)

SPQM extracts service data from locally stored transactional databases (thereby preventing staff from having to double-enter data). Users interact with a graphical dashboard-style interface to ask a variety of questions about the provision of services. For example, who is

providing what kind of care? How much does the care supplied by different staff cost? Which consumers cost the most to treat (either individually or by type)? Are the services that consumers receive appropriate for their diagnoses? Do the services provided for a given diagnosis differ by gender, age, ethnicity, and so on? Are some kinds of consumers more likely than others to miss their appointments? And compared to consumers with private insurance, do Medicaid consumers with a given diagnosis receive the same array and quality of services? Given the range of possible differences between Medicaid and private insurance, it is informative to know whether Medicaid consumers receive the same array of services compared to consumers with private insurance.

To achieve a working knowledge of SPQM, the typical user participates in two to three hours of web-based training with the company that makes the product, MTM Services. MTM provides monthly consultation services to the MHCs that have adopted SPQM. In the first of these sessions, MTM staff review SPQM output just with

*SPQM allows mental health centers to track the range and quality of their services.*

management teams. Later, the list of attendees is expanded to include supervisors and program staff, who receive copies of the SPQM output through a subscription "push" service that delivers this output electronically. Regular, automatic access to the output helps supervisors and program staff better understand the types of services they provide and make improvements to service quality.

SPQM involves virtually no startup costs other than the staff time required to reach agreement on the data that the MHC wishes to collect. MTM offers SPQM as a subscription service. The price varies widely depending on the size of the user group. Costs range from \$10,000 annually for individual MHCs to over \$400,000 for Statewide measurement efforts. Costs also vary depending on the number of features the client wishes to implement; the level of detail the client wishes to see in reports; the set of interface features that the client desires; and

the number of MHCs involved in a Statewide initiative. These costs include ongoing monthly or quarterly consultation support to help managers make effective use of the data that SPQM collects.

## Case Studies

### **Carlsbad Mental Health Center**

Before it implemented SPQM in late 2007, the Carlsbad Mental Health Center (CMHC) in Carlsbad, New Mexico operated with medical loss ratios between 0.98 and 1.02. This means that CMHC spent between 98% and 102% of its revenues providing services and paying for overhead. As a non-profit, it could use grants to cover its operating losses. CMHC's loss ratio

*The Carlsbad MHC reduced no-show rates, shortened wait times, and increased revenues.*

was high in part because it experienced numerous no-shows and cancellations. No-shows were common in part because consumers had to wait a long time to get an

intake session or an initial follow-up appointment. At the start of 2008, it took an average of six weeks after intake for consumers to see a nurse practitioner or a psychiatrist. Because the no-show rate was so high, CMHC could not calculate its retention rate. It was impossible to determine how many consumers had completed a treatment plan and how many had simply stopped coming because they were frustrated with the long wait-times between appointments.

CMHC implemented SPQM in September, 2007. Between that time and August, 2008, the center dramatically improved its understanding of its demand and capacity. In fact, CMHC was able to grow its capacity by 20 percent, in part by ensuring that all consumers could see a master's level clinician on the first day that they requested services. The wait time for consumers to see a psychiatrist fell from six weeks to just 11.1 days, while the wait time for the second appointment fell to 11.2 days.

Analyses using SPQM revealed that legal referrals at CMHCs had a much higher no-show rate compared to other types of referrals, probably because such consumers were less

invested in their own treatment. Now, before legal referrals can schedule an individual session, they must first come to four group sessions. This requirement has reduced the no-show rate at CMHC. Using less expensive groups sessions as a kind of filter has resulted in considerable savings. Overall, between September, 2007 and August, 2008, revenues at CMHC increased by 22 percent. Because services at CMHC are delivered in a much more cost-effective fashion, management feels that the center has become a better steward of scarce Medicaid dollars.

### **Arkansas Division of Behavioral Health Services**

The Arkansas Division of Behavioral Health Services (DBHS) serves 70-75,000 unduplicated consumers every year. Its network includes 15 MHCs, each covering a wide geographic area, and one State hospital, which has 230 beds. Before implementing SPQM statewide, DBHS collected data on an annual or semi-annual basis, and only in an aggregate form. Descriptions of services were not tied to individual people, so the State could not track which consumers received which services. By the time DBHS decided to implement SPQM statewide, all 15 MHCs had already adopted it on their own. However, the State hospital was not using SPQM, and data collection methods varied widely from one MHC to another.

*By collecting and analyzing uniform data, Arkansas improved consumer satisfaction with MH/SU care and achieved cost savings.*

Universal implementation of SPQM in Arkansas required that all providers collect data in a uniform way. This uniformity has enabled the State to conduct a wide array of informative comparisons. For example, DBHS can look at time-to-appointment after discharge from the State hospital. DBHS has used this information to determine whether some MHCs are doing a better job than others of scheduling follow-up appointments and encouraging consumers to keep those appointments.

Prior to the implementation of SQPM, CMHCs provided measures of consumer satisfaction

based on surveys of convenience samples. These measures were aggregated across services. Satisfaction rates in these surveys consistently ranged between 80 percent and 95 percent. Implementation of SPQM has allowed CMHCs to draw random, stratified samples. More recent surveys using these improved sampling methods have shown satisfaction rates ranging from 55 percent to 80 percent – a range that DBHS views as more credible. DBHS can now detect differences among MHCs in the treatment of consumers categorized by diagnosis, sex, ethnicity, and so on. The quality improvement plans that MHCs submit annually must now focus on the areas in which CMHCs have received low consumer satisfaction scores. Crucially, because SPQM has a payer field, DBHS has been able to show that levels of satisfaction among Medicaid consumers compare favorably to levels of satisfaction among non-Medicaid consumers.

### **Colorado Behavioral Health Care Council**

In 2003-2004, MHCs in Colorado were confronted with daunting cuts in State funding. In the wake of these cuts, the Colorado Behavioral Healthcare Council (CBHC), a non-profit organization that represents MHCs in the State, encouraged its 17 member organizations to adopt SPQM. Although each center had already been working to collect encounter-level data, there was considerable variation among the data systems. While 13 centers had implemented SPQM, they had not done so in a consistent fashion. Moreover, the four other centers had implemented entirely different systems. CBHC reasoned that bringing uniformity to the data collection and analysis process would help the centers to improve quality and control costs. It would also help the Council raise awareness among key stakeholders in the State about the need for MH/SU services in Colorado and about the capacity of the State's MHC system to meet those needs.

The first step for CBHC was to achieve consensus among its member organizations about how to categorize and record attributes of different services. CBHC and its member organizations had to decide, for example, what counted as a day of service. Initially CBHC

encountered a great deal of reluctance among its member agencies with regard to the sharing of data. Its member MHCs did not want to expose their practices in a way that might invite criticism, either from their fellow centers or from stakeholders outside the CMHC system. To alleviate these concerns, CBHC began by masking the identities of individual centers. Once the centers felt confident that the data were reliable and would only be used to promote positive change, CBHC began identifying individual centers. This promoted conversations among the centers about the challenges they faced and the best practices they developed to meet those challenges.

Like Carlsbad Community Health Center and the Arkansas Division of Behavioral Health Services, CBHC used SPQM to answer important questions about practice variance. For example, CBHC suspected that diagnosis patterns varied across centers. One analysis

showed that a rural MHC was diagnosing schizophrenia as an adjustment disorder much more often than would be expected given the prevalence of

adjustment disorder in the population. This was because the center's capacity to treat adjustment disorders was much greater than its capacity to treat schizophrenia. This information led to essential capacity enhancements at that center that improved the quality of service that consumers received.

Individual centers have started to monitor the cost of providing specific services, with an eye toward making the provision of such services more cost-effective. For its part, CBHC has assembled a committee comprised of staff from its member centers to identify a common set of outcome measures to evaluate the effectiveness of different MH/SU treatment protocols (e.g., the Global Assessment of Functioning scale, GAF). These measures will be recorded and analyzed using SPQM.

*In Colorado, MHCs used data collected with SPQM to support peer learning and increase capacity in strategic ways.*

## Conclusions

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This brief profiled the experiences of Mental Health and Substance Use care organizations in three States – New Mexico, Arkansas, and Colorado – that have implemented a health information technology system – SPQM – to help them control costs and improve the quality of the services they deliver. Collectively their experiences suggest that there is much to be gained from using a system that combines claims-level data with service-level data. For example, organizations can reduce their no-show rates, encourage the use of cost-effective services, and compare the array of service that Medicaid consumers receive with the array of service that non-Medicaid consumers receive.

To implement a health information technology system like SPQM, organizations must overcome a variety of challenges. The staff are often nervous at first about how the data will be used outside their centers. It takes time and (sometimes intensive) technical assistance to make users feel confident about the integrity of the data. To help build trust in the early stages of implementation, it may be useful to mask the identities of individual MHCs. Once staff understand the data and feel comfortable with it, the act of unmasking the data can lead to productive conversations about challenges and best practices. These conversations can lead to organizational change both within and across Mental Health and Substance Use care organizations.

In sum, the use of SPQM or a similar program in MHCs leads to three outcomes: (1) SPQM improves the quality of care for all consumers of MH/SU services, including Medicaid beneficiaries; (2), it allows administrators to conduct analyses that compare the array of services received by Medicaid beneficiaries to the array of services received by consumers who are covered by other forms of insurance; and (3) utilizing information generated through SPQM helps center administrators control costs, which reduces the budgetary demands placed on State Medicaid dollars by consumers with MH/SU problems.

## Discussion Questions

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- How can the combination of claims data and service-level data lead to improved outcomes for consumers and for funders of MH/SU centers services? What kinds of improvements might be achieved beyond the ones discussed in this report?
- What kinds of challenges must be overcome at different levels in order to implement a system that combines claims data with service-level data?

## For Further Information

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