Medication Variations Performance Improvement Project: 2002-2003
By Coastal Behavioral Healthcare
Winner, Chairman's Award, 2004 Negley Awards for Excellence in Risk Management

Coastal Behavioral Healthcare, Inc.'s (CBH) mission is to offer affordable behavioral healthcare services that exceed customer expectations for quality, availability, and satisfaction. CBH's commitment to customer satisfaction and excellence in care is reflected by its utilization of MHCA's Customer Satisfaction Survey since 1996.

Together our Quality and Performance Improvement (QPI) and Risk Management Systems promote immediate problem identification and enhance clinical services to improve client care. High-risk and problem-prone areas in the service delivery system are analyzed monthly through a number of committees. Trends are identified across CBH programs, and QPI and Risk Management staff work with management to address findings, make recommendations for remediation of problem areas, assist in the implementation of preventive and/or corrective actions, and monitor the resolution of identified problem areas. Quarterly reports for corrective action and preventive solutions are presented to management staff and the Board of Directors.

Nationally the prevalence of errors in medication administration has caught the attention of healthcare providers, insurance companies, patients, and government leaders. The Joint Commission On Accreditation of Healthcare Organizations in January of 2003 required the implementation of National Patient Safety Goals and related recommendations and standards that include medication use.

QPI and Risk Management staff elected to examine the CBH system of administering medication and the prevalence of medication variations in CBH programs. Identifying the existence of medication errors within services, staff presented its Medication Variations Performance Improvement Project (MVPIP) aimed at reducing medication errors. We presented the findings of this project to our Executive Leadership Committee and to the JCAHO on-site reviewer during our 2003 JCAHO survey. The MVPIP was initiated at our CBH Kreisman Center Crisis Stabilization Unit (CSU), chosen for its high volume of clients and high number of medication passes on an annual basis. The CSU is a 24/7 facility that provides emergency treatment for clients in need of immediate intervention due to a life-threatening psychiatric emergency. The majority of adult clients are admitted to the CSU involuntarily. The CSU operates a 20-bed Adult Unit and a 10-bed Children's Unit. CSU clients present with a variety of diagnoses and symptoms, frequently acutely psychotic, severely depressed, manic, intoxicated, or unable to think clearly. It is the responsibility of CSU staff to ensure that clients are treated safely and effectively. In the past year we served 1,400+ clients, logging a daily average of 180 medication passes on the adult unit and 15 on the children's unit.

The purpose of the MVPIP was to develop and implement long-term strategies for safe, effective, efficient medication administration practice. The objectives of the project were to assess the current system, identify patterns of problematic practice, and establish a plan of action to address identified weaknesses. At the end of the research phase, CBH began implementing short-term and long-term strategies to strengthen the medication administration process. Once the quality improvement strategies identified through this project have been fully implemented at the CSU, CBH will periodically evaluate the outcomes on the client, staff, and process levels to ensure that time-tested solutions have resulted in positive program changes as hypothesized through this project. MVPIP objectives and action steps were organized using the **PLAN-DO-CHECK-ACT** configuration of the Shewart four-step process.

In the planning phase, a literature review regarding medication errors in nursing practice was conducted. It revealed that most medication errors are due to multiple system failures. These findings offered a starting point for investigating why medication administration errors occurred at the CSU and how the number of instances might be reduced. We determined that assessment processes would have to include several different factors. The literature review also reinforced the importance of creating an environment that encourages error and near error reporting in a non-punitive manner, which has been shown to decrease medication errors. Although a practice at CBH for many years, this needed to be reinforced with staff to ensure that incidents were reported in a timely manner. We then assessed the current medication administration system in place at the CSU. The nursing staff

identified problem areas. With this information, a cause and effect analysis was used to explore problem areas. The following problem areas were identified and examined closely: (1) Resources/staffing that influence medication administration (2) Policies and Procedures for medication administration (3) Current monitoring/measurement tools for medication errors (4) Area/Environment where medications are administered.

Staffing needs and patterns were analyzed, including physician, nurse, and psychiatric technician scheduling and availability as related to staffing needs. At the time of the analysis, the CSU had just one physician who was primarily responsible for covering both the Adult and Children's Units. This physician shortage had an impact on the transcription process, which was immediately identified as one potential cause for an increase in medication errors. Concurrently, CBH was grappling with a nursing shortage and had to depend on nursing staff referred by temporary staffing agencies. Similarly, the CSU was experiencing retention problems with psychiatric technicians, constantly training new employees or using employment agency technicians for daily staffing needs.

Nursing staff indicated that the policy and procedure for medication administration and the Medication Administration Record (MAR) used to report client medication needs and administration were confusing and inefficient. They suggested a redesign of the MAR to simplify directions for administering routine and PRN medications, developing a separate MAR for treatments, and implementing a specific MAR just for diabetic protocol. Nursing staff further indicated that the policy and procedure for medication administration was not always clear even to core CBH staff. Coupled with the constant flow of "temps" who required supervision and on-the-job training, CBH nurses spent a significant amount of time explaining medication policies and interpreting the use of the complicated MAR.

Changes made as a result of direct feedback from nursing staff have resulted in successful implementation of a new, more user friendly MAR instrument, the establishment of consistent training protocols to ensure new staff members receive the same level of education in utilizing these tools, and installation of a constant cycle of measurement of the new process to continue to monitor medication errors. Blame free reporting of medication errors is emphasized and supported at the CSU, which ensures that the nursing staff plays a key role in improving the medication administration process. CSU nursing staff now recognizes that prompt reporting of medication errors can help identify weaknesses in the process, contribute to increased client safety and promote consistent improvement of the process itself. Nurse feedback prompted the consulting CSU pharmacist to begin conducting weekly order/transcription checks, which are reported to the Nurse Manager weekly. These variations are reported to the Clinical Standards and Medical Standards committees in monthly QPI reports. Involvement by the pharmacist ensures the fostering of a team atmosphere for all CSU clinical staff and a checks and balances system designed to reduce the occurrence of medication errors.

Nursing feedback also reported problems with the environment of the adult unit nurses' station, where medication is administered to clients. Nurses indicated dissatisfaction with the medication cart, noisiness and distractions in the area where the medication nurse transcribed orders and poured medications, and structural problems with the nurses' station prohibiting the checking of orders and transcriptions. Plans are underway for renovation of the adult nurses' station to implement improvements. *(Editor's Note: CBH's Negley Award of $5,000 will be spent on these renovations.)*

Once the findings from the research phase of the project were analyzed, the following strategies were implemented to rectify each identified problem area:

Staffing:

Stabilized physician coverage by hiring a physician for the adult unit.

Worked on retention of our core nursing staff. HR Department conducted salary surveys, salary adjustments were implemented, and recruitment efforts were increased. This resulted in hiring of new staff and retaining CBH current nursing staff thereby improving scheduling consistency.

Worked on the retention of psychiatric technicians by improving salary range and creating additional

advancement opportunities. CBH also increased its pool staff in order to decrease its use of "temp" techs.

Policy and Procedures:

CBH discussed, reviewed, revised, and created new policies and procedures in QPI committees and staff meetings. CBH revised the MAR, created standardized procedures, and improved orientation by lengthening orientation time and using mentors for continued support. The CSU continues to assess and collect feedback at monthly nursing meetings.

Monitoring/Measurement:

Utilized data from Pharmacists review, (weekly, monthly, quarterly).

Utilized data from QPI/Risk Management

Implemented Nursing QPI strategies, including review of nursing medication process, monitoring of shift checks, and the timely identification and correction of problems to prevent medication errors.

Implemented medication administration competency evaluations.

Area/Environment:

The medication administration area was given a temporary solution, including designated space for the medication nurse to chart.

CBH has plans to physically modify the nurses' station, to provide decreased distractions.

Conducted a review of available styles of medication carts, obtained nursing feedback, and purchased a new medication cart.

Milieu:

Reviewed client programming and Medication Group effectiveness.

Increased core staff and revised staffing patterns for consistency.

Implemented ID bracelets along with photo ID in MAR for client identification.

Still in the CHECK phase, the MVPIP is currently in operation. Two revisions of the MAR have occurred as a result of recent staff feedback, which has created the opportunity for nursing staff to have a direct impact on CBH procedures and tools. Data collected in QPI reports continues to be analyzed in an effort to determine the effectiveness of implemented changes on the goal of the project, which was to reduce the number of medication errors committed by CSU staff

The MVPIP was, as measured on the client level, a tremendous success in its early implementation. Based on an analysis of medication variations for the past 21 months, it is anticipated that the CSU will demonstrate a 20% decrease in medication variations for 2003 when compared with the 2002 medication variation numbers.

We utilize MHCA's Customer Satisfaction Survey to evaluate customer satisfaction and benchmark CBH services to other like programs. Indicator (la) "Overall, how would you evaluate the quality of service you received?" for the CSU adult units shows an increase in customer satisfaction from 2002 (82.9%) when compared to the first three quarters of 2003 (86.4%). While this increase in satisfaction may not be directly related to the reduction in medication errors, it may reflect many of the other changes implemented as a result of the project that have lead to a more therapeutic and safe milieu. CBH considers receiving such a high approval rating from clients, the majority of who have been involuntarily admitted to the CSU, an admirable achievement.

About Coastal Behavioral Healthcare: CBH is a not-for-profit, community-based corporation that began as a one-room storefront more than 30 years ago. Since that time, CBH has grown with the needs of the communities it serves and today provides an integrated system of care in mental health, substance abuse, criminal justice, prevention, intervention, and treatment services. CBH is a licensed provider for the Florida Department of Children and Families and maintains accreditation with the Joint Commission on Accreditation of Healthcare Organizations. CBH currently provides a continuum of care to children, adults, seniors, and families through 58 programs in 21 locations throughout six counties in Southwest Florida. CEO is Dr. Christine A. Cauffield.
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