

# Improvement of the Medication Use Process through Centralization of Nursing Services

By **Boys Town National Research Hospital, Omaha, Nebraska**

Winner: Board of Directors Award, 2005 Negley Awards for Excellence in Risk Management

The Behavioral Health Services of Boys Town National Research Hospital (BTN RH) encompass varying levels of care. The Intensive Residential Treatment Center (IRTC) is designed to help troubled youth ages 7 to 18 with psychiatric disorders. Located on the campus of Boys Town National Research Hospital in Omaha, Nebraska, the IRTC provides safe, secure and effective treatment within a family oriented unit and is currently a 40 bed 24/7 program. The IRTC offers a program specifically designed for more seriously troubled youth who require supervision, safety and therapy but do not require inpatient psychiatric care. The three 13-bed, 24/7 Treatment Group Homes (TGH), comprised of two male and one female home, provides safe, secure, and effective treatment for behaviorally impaired and emotionally disturbed youth ages 8 to 18. These youth present a psychiatric profile that makes them appropriate for treatment in a safe, structured environment that offers the support, which enables youth to progress in daily living skills and appropriate healthy socialization. The program provides active treatment for youth who no longer need intensive services but whose diagnosis and treatment plan determine a need for less restrictive, but extended care alternative to residential treatment.

The personnel at BTNRH primarily responsible for day-to-day medication management are Registered Nurses and Registered Pharmacists. The IRTC and TGH also utilize Registered Medication Aides (RMA) to administer medications. The focus of this report is on the TGH program.

RMAs may participate in medication administration under strict guidelines. This includes successfully completing BTNRH's medication training program, demonstrating competency, and administering medications only under the direction and monitoring of a Registered Nurse (RN). RMAs must be certified on the Medication Aide Registry maintained by the Nebraska Department of Health and Human Service Credentialing Division. (Title 172, Chapter 95-96). The state of Nebraska grants certification for 3 years. Internal competency reviews are completed annually and as further indicated.

The RMA is responsible for getting the *right* drug to the *right* recipient in the *right* dosage by the *right* route

at the *right* time (five rights). The individual RN providing direction and monitoring is responsible for observing and taking any appropriate action regarding any desired effects, side effects, interactions, and contraindications associated with the medication.

The Residential Treatment Center and the Treatment Group Homes share a similar process for medication management. Medication orders are faxed to the contracted pharmacy, Creighton University Medical Center Clinic Pharmacy, where a pharmacist reviews the orders before being dispensed. They are evaluated for appropriateness of therapy, contraindications, and cost-effectiveness. Any concerns that the pharmacist has are discussed with the prescribing physician and the nurse prior to any medication being dispensed.

The medications are dispensed in unit-dose packaging, labeled as a prescription, and delivered to the nursing unit in a locked tote by BTNRH security personnel. Medication Administration Records are provided by the pharmacy for all new admissions and at the beginning of each new month. A Registered Nurse reviews each new Medication Administration Record (MAR) by comparing the new MAR to either the physician orders or to the previous month's MAR as appropriate. Any discrepancies on the new MAR are discussed with the pharmacist and resolved. When it is discovered that a discrepancy has resulted in a medication error, then a medication error report is completed.

Either a Registered Nurse or a Registered Medication Assistant administers the medications. Prior to administration, the RN or RMA performs a 5-point check comparing the medication, medication label, and medication administration record to assure that the right medication is being given in the right dose at the right time by the right route to the right patient. Patients are identified by their name and photograph, which is kept with the MAR, meeting the JCAHO Hospital's National Patient Safety Goal of improving the accuracy of patient identification. The prescription label affixed to the medication is compared to the MAR to ensure that the medication name, dose, route and directions match. Any discrepancies are discussed with the pharmacist and resolved. When it is discovered that a discrepancy has

resulted in a medication error, then a medication error report is completed.

The medication error reports are forwarded to the consultant pharmacist who prepares a quarterly report for the Pharmacy and Therapeutics (P&T) Committee. The P&T Committee reviews the report, recommends any necessary action, and forwards their findings to the Medical Executive Committee of BTNRH. The consultant pharmacist on a quarterly basis presents these findings to the Medical Executive Committee.

From 2000 - 2002, the error rate per 1000 doses for both the RTC and the TGH ranged from 1.7-2.4. In the first quarter of 2003, the error rate for the TGH increased to 4.4. By the second quarter, this rate was 11.6. The overwhelming majority of these errors were administration errors with the most common administration error being the omitted dose. It should be noted that all of these errors were non-sentinel events and did not result in significant adverse effects, nor did they increase patient stays. When the medication administration process at the Treatment Group Homes was examined, it became evident that there were too many individuals (RMAs) who had medication administration responsibilities, which resulted in a decreased level of continuity of medication dispensing. An individual RMA might administer medications only once every several weeks. This infrequency of performing the task made it difficult to maintain competency and accountability. In addition, the RMAs administering medications so infrequently did not maintain a sense of ownership for the task, which resulted in decreased commitment to the medication management program.

In late 2003, there were 63 RMA's trained to administer medications at the Treatment Group Homes with only 1 Registered Nurse providing oversight. One nurse alone was not able to maintain training, assure competency, and provide supervision for this many RMA's. It was suspected that this was a contributing factor to the increasing number of medication errors. In addition, it was expensive to provide training and competency assessment for this many individuals.

While the nurse was responsible for oversight of the RMA's medication administration duties, the coordinator for the individual Treatment Group Home to which they were assigned ultimately supervised the RMAs. These coordinators supervised activities such as scheduling health care appointments, ordering medication refills, and recording vital signs.

To improve the consistency for medication administration and other aspects of medical, dental, and

vision health care, the TGH nurse proposed that the TGH nursing office become a separate functioning department that would include the RMA's previously under the auspices of the individual homes. The nursing office would be responsible for all medical, dental, and vision needs of the TGH youth. Rather than having the coordinator for each individual Treatment Group Home responsible for youth health care appointments, the nursing office would assume this role. The nursing office would include 4 RMAs who would be responsible for:

- ◆ Administering medication
- ◆ Documenting medication administration
- ◆ Scheduling health care appointments
- ◆ Transporting youth to health care appointments,
- ◆ Maintaining adequate inventory of physician ordered medications
- ◆ Collection and recording of vital signs
- ◆ Collecting and documenting monthly Performance Improvement measures
- ◆ Performing chart reviews for proper paperwork and documentation
- ◆ Assisting with documentation and follow-up regarding health care issues.

There were also several other individuals retained as RMA's to provide back-up coverage, however, only four individuals perform the job on a routine basis (one full time and three part time). These four positions cover 88 hours out of 188 hours a week on site. This proposal would not only increase the accountability of the nursing office, but would also decrease the expenses for training and competency assessment for the RMAs. Since the TGH program would be internally shifting direct care personnel from one department to another, there would be little to no impact on the salary budget.

The proposal was accepted and implemented in January of 2004 with great success.

- ◆ The medication error rate per 1000 doses decreased from:
  - ◆ 6.9 in the last quarter of 2003 to
  - ◆ 1.5 in the first quarter 2004 to
  - ◆ 0.6 and 1.2 in the second and third quarters of 2004 respectively
- ◆ The documentation of pain assessments improved from:
  - ◆ 41% in February of 2004 to
  - ◆ 76% in March of 2004 to

- ◆ 98% in April of 2004 to
- ◆ 100% in both May and June of 2004
- ◆ Youth refusals to take medication has reduced steadily and dramatically from:
  - ◆ 69 refusals in the 4th quarter of 2003 to
  - ◆ 44 refusals in the 1st quarter of 2004 to
  - ◆ 15 refusals in the 2nd quarter of 2004

These numbers all fall well below the national averages.

In addition to the above improvements, no medical, dental, or vision appointments have been missed due to RMA error since March of 2004, consistency in the documentation of medications on the Medication Administration Records has dramatically improved, required narcotic counts are consistently documented, monthly youth vital signs are consistently obtained and documented, and monthly Performance Improvement data collection is consistently completed.

Having this RMA program in place has also allowed the TGH nurse to develop several other medical-related improvements. The nurse has been able to focus on obtaining the youth immunization records and keeping them current; re-organize each Treatment Group Home's medication dispensing areas to insure compliance with all state legal requirements and Joint Commission Standards; track all youth medications, medication errors, and youth injuries in the Boystown National Database system allowing this information to be incorporated into the youth's treatment plan; and focus on youth teaching regarding medications, general hygiene, safety, and general health care.

The Boystown TGH also routinely surveys their residential youth each quarter, including a satisfaction rating in regards to medication teaching and knowledge of medications and effects. Since the initiation of the RMA program, the past two quarters of consumer reports revealed and improvement in the quality of care and understanding in youth medication management. ❖

### **About Boys Town National Research Hospital**

Girls and Boys Town, founded in 1917 and officially known as Father Flanagan's Boys' Home, is a national, nonprofit, nonsectarian charity engaged in the care and treatment of at-risk boys and girls, and families in crisis. Headquartered at Boys Town, Nebraska, it offers numerous assistance, treatment, educational, and medical programs throughout the United States.

Since opening its doors in 1977, **Boys Town National Research Hospital** has provided comprehensive care and treatment, including corrective surgery to nearly 200,000 children with hearing loss, speech problems, cleft lip and palate, vision impairment and related disabilities.

Girls and Boys Town's direct care programs, which provide a continuum of care for youth, include Behavioral Health Services, Residential Services, Short-Term Residential Services (Shelters), Family-Based Services, and Treatment Foster Family Services. Behavioral Health Services provide short-term inpatient treatment for children and adolescents ages 7 to 18 who have severe emotional, behavioral and mental health problems. Residential Services focus on family style living. Short-term Residential services work toward achieving individual treatment goals, learning life skills and problem-solving techniques, identifying challenges, and making better choices. Family-Based Services provide trained consultants to help families whose children are at-risk for removal from their homes due to abuse or neglect. Treatment Foster Family Services provide care to infants through 18-year-olds, who need more attention and treatment than they could receive in a traditional foster care placement.

Presenting this program for Award consideration were Dorraine Reynolds, Pharmacist, and Dennis Vollmer, Director of Treatment Group Home. CEO is Patrick E. Brookhouser (402-498-6510).