

IMPROVING QUALITY OF PSYCHOTROPIC PRESCRIBING REDUCES HOSPITAL UTILIZATION

Kit Simpson, DrPH¹; Joe Parks, MD²; John Byrd, RPh MBA³; George Oestreich, PharmD⁴;
Richard Surles, PhD³; John Docherty, MD³

¹Medical University of South Carolina, ²Missouri Department of Mental Health, ³
Comprehensive NeuroScience, Inc., ⁴Missouri Division of Medical Services

Presented at the 57th APA Institute on Psychiatric Services Meeting and the Disease Management
Association of America Meeting - San Diego, CA October 2005

Background

- ❖ Prescription drugs account for 11% of the national health care spending.
- ❖ Expenditures for drugs have been growing at an annual rate of 15% which is higher than the increases seen in either physician and clinical services or hospital care.¹
- ❖ The increase can be attributed to higher overall utilization and, to a lesser extent, growth in prescription drug utilization, newer and more expensive drug therapies that replace older and less expensive ones, and price increases by the pharmaceutical manufacturer.¹
- ❖ Medications to treat psychiatric conditions are among the most costly drugs to Medicaid programs.
- ❖ The cost of antidepressants and antipsychotics has been reported to be nearly 20% of Medicaid prescription drug expenses with all psychiatric medications accounting for (1/3) one-third of those expenses.^{2,3}
- ❖ States have implemented a variety of cost-containment strategies that have included restricted formularies with preferred drug lists (PDL), physician prior authorizations (PA), prescription limits, generic substitutions and increases in co-payments.⁴

Research Objectives

The primary research objective of this study was to find out if the **Behavioral Pharmacy Management**[®] (BPM) program causes disruption in patient care;

Secondary objectives were to determine whether or not this physician intervention results in decreased rates and use of hospital services - a recognized outcome for interventions^{5, 6}, and subsequently if it results in a decrease of overall costs of care for patients.

ACKNOWLEDGEMENT

The Behavioral Pharmacy Management program is offered through a service contract between Comprehensive NeuroScience, Inc. and Eli Lilly and Company to the State of Missouri.

Intervention

- ❖ Behavioral Pharmacy Management[®] (BPM) is an alternative to preferred drug lists, prior authorizations for psychiatric medications, fail first approaches or intensive case management
- ❖ BPM is an educational intervention that functions as a quality improvement tool that but also produces cost savings by aligning outlier physician prescribing practices with best practices.³
- ❖ Prescription drug claims from the State's Medicaid program are analyzed monthly to identify questionable prescribing patterns such as:
 - prescribing three or more antipsychotics;
 - multiple prescribers for antipsychotics;
 - prescribing an unusually high or low dose of antipsychotics;
 - prescribing two or more sedative-hypnotics or anxiolytics;
 - polypharmacy in several therapeutic classes;
 - prescribing three or more psychotropics to children
- ❖ All physicians who are identified as having potential deviations from best practice guidelines as outlined in the quality indicators above receive a mailed intervention that includes:
 - A summary letter of all their patients with potential problems;
 - A 90-day pharmacy claims drug history for each of their patients to whom the selected indicators applied; and
 - A one-page "best practices" with clinical considerations and empirical references related to the clinical issue.

Data Source/Population

Data Source and Study Population: The data source for this study was the Medicaid claims database, including pharmacy, inpatient and outpatient claims, for the State of Missouri.

Exclusion Criteria: Recipients were excluded if they had been in a nursing home or were not continuously eligible for Medicaid during the (6) six months prior or (6) six after initiation of the BPM physician educational intervention.

Intervention/Comparison Groups

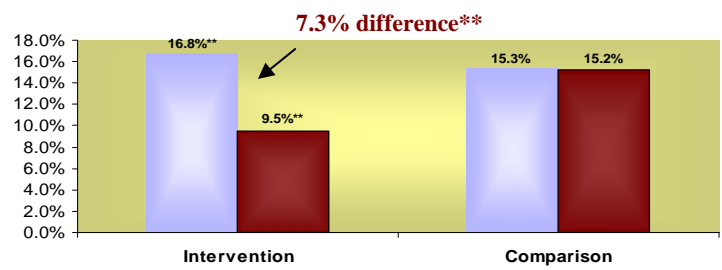
Intervention Group: Medicaid recipients whose physician received a BPM intervention mailing for at least one of the program's quality indicators during two consecutive mailings (January 2004 and March 2004) were used as cases for this analysis. There were 1911 cases in Missouri.

Comparison Group: A comparison group was created using propensity scoring to document any time influences within the entire population as well as for the natural effects of regression towards the mean for cost outliers for the types of patients included in the intervention group. We wanted to select a sample of comparison recipients who were similar to the patients in our intervention group in terms of the risk of deterioration of their mental health status, presence of comorbid conditions and other factors known to be associated with outcomes of interest — hospital admissions and overall cost of care. We used these variables, along with demographic variables, to predict hospital admission for the intervention group. The resulting propensity score variable contained five strata: 1) <.198; 2).198-.368; 3).369-.537; 4).538-.707; 5)>.707. These strata were then used to group all patients in the intervention group by risk of hospital admission in the six months prior to the intervention and the 1911 recipients were distributed as follows among the five propensity strata: 1) 1307; 2) 581; 3) 13; 4) 8; 5) 2. We then constructed similar propensity measures for all recipients who were not in the intervention group, using data from the six month time frame corresponding to the study pre-intervention period. We then selected the same number of recipients (1911) for the comparison group cases using the random selection function in SAS. Thus, the comparison group is distributed in an identical manner among the five propensity strata as the distribution described for the intervention group.

Results

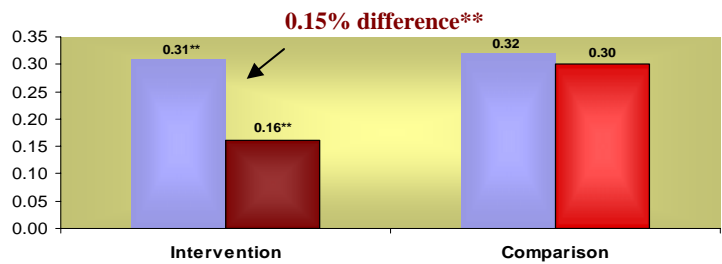
	INTERVENTION	COMPARISON
Age (years)		
Mean (SD)	38 (18.1)	40 (11.8)
Gender—N (%)		
Male	797 (42)	1035 (54)
Female	1114 (58)	876 (46)
Race—N (%)		
White	1652 (86)	1303 (68)
Non-White	213 (11)	570 (30)
Unknown	46 (3)	38 (2)
Dually Eligible-N (%)		
Yes	1103 (58)	1077 (56)
No	808 (42)	834 (44)

Percent of Recipients Admitted to a Hospital



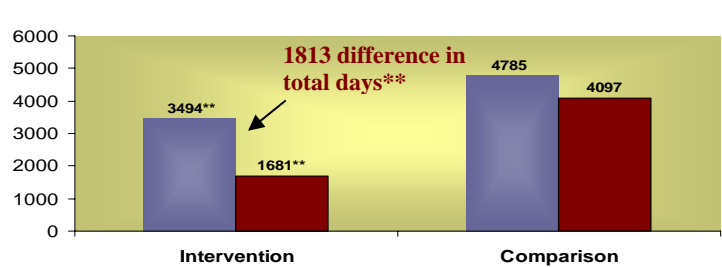
** p<0.001

Mean Number of Hospital Admissions



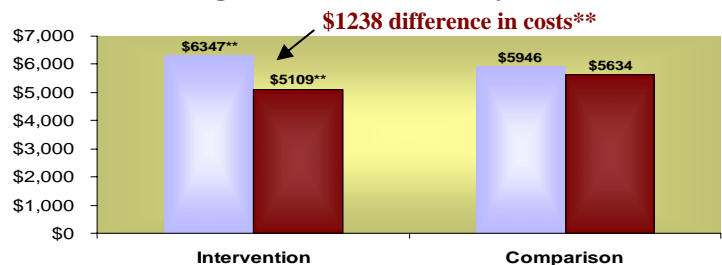
** p<0.001

Total Hospital Days for All Cases



** p<0.001

Average Total Non-Pharmacy Costs



** p<0.001

■ Pre-Exposure (6 months prior to the intervention)
 ■ Post-Exposure (6 months after the intervention)

Conclusions

1. BPM does NOT cause a disruption in patient care.
2. BPM appears to play a role in the overall reduction in hospital utilization and cost of care for patients.
3. Compared to more complex and costly changes, our relatively low cost intervention (BPM) helps the State to identify the Medicaid recipients who are of greatest concern from a financial perspective.

