Magellan Rx MANAGEMENT℠

Polypharmacy Program

Pharmacist Run Academic Detailing Behavioral Health Polypharmacy Program Delivers Positive Outcomes Within a Medicaid Population

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Purpose

To evaluate the clinical and economic outcomes of a prescriber focused academic detailing program targeting behavioral health polypharmacy

Background

Psychiatric polypharmacy has developed into a widespread clinical practice for many psychiatric conditions. It is estimated that up to one-third of all outpatients are prescribed three or more psychotropic drugs.[1] In addition, it is estimated that polypharmacy is responsible for 28% of hospital admissions and is the fifth leading cause of death in the United States.[2]

A field based pharmacist academic detailing program, Whole Health Rx, was created to identify providers who had patients taking four or more Behavioral Health (BH) medications and/or controlled substances within the last 30 days. The pharmacists scheduled consultations with the providers to review the medication regimens of their patients, and worked with them to identify opportunities to consolidate therapy (i.e. therapeutic duplication, multiple providers writing BH medications, dose optimization, patients taking medications that were supposed to be discontinued, etc.).

Methods

A computer generated list of all prescribers who had at least one patient being prescribed a minimum of four BH and/or controlled substances within a 30 day period was derived each month. The providers were ranked by the number of opportunities and the pharmacist would prioritize consultations with the providers with the most opportunities. The BH and controlled substances included in the algorithm were: antipsychotics, antidepressants, attention deficit hyperactivity disorder medications, mood stabilizers, benodiazepines, sedatives, hypnotics, barbiturates, and CII, CIII and CIV narcotics. During the interventions, prescribers received detailed patient information and were asked to validate that each prescription was intended and not a result of miscommunication or refills that have not been discontinued, assess safety of the prescribed regimen, assess the complexity of the regimen's effect on adherence and validate patients' adherence, and optimize dosage. Interventions were conducted between January and October of 2015 within two unique study populations: a FFS Medicaid plan and a Specialty Managed Medicaid plan designed to treat members with serious mental illnesses.

Using SAS version 9.4 pharmacy and medical claims of identified patients were extracted six months pre and post intervention, where the intervention date served as the index date for this study. As a proxy for continuous enrollment, patients with less than two claims and patients identified as having claims with a date of service that spanned less than 150 days were excluded from the eligible sample. Lastly, patients with no claims during the post evaluation period were also excluded.

A cross-sectional analysis was performed comparing pre- and post- utilization and spend in the aggregated study population, as well as separately. Pooling the two study populations increased statistical power, while stratification by study population allowed for the replication of all findings across the two lines of business. Significance was calculated using the Wilcoxon signed ranked test for paired data. A significance threshold of $p<0.05$ was employed. All performed tests remain uncorrected for multiple testing.

Disclosures

This research was conducted by Magellan Rx Management, Scottsdale, AZ, without external funding.

Results

Population and Outreach Results

A total of 415 prescribers received an intervention between January and October 2015, resulting in 2,784 patients that met the inclusion criteria for the combined study population (FFS Medicaid, n = 2,005, Specialty Managed Medicaid, n = 779). We compared demographic information for the two study populations and observed differences for age, sex and medical diagnoses. On average, the Specialty Managed Medicaid study sample were significantly older (mean age 43.8 years) compared to the FFS Medicaid study sample (mean age 34.2 years). In addition, the Specialty Managed Medicaid client had significantly more female patients (62.9%) compared to the FFS Medicaid sample (56.6%). Lastly, the top three diagnoses based off all medical diagnosis codes from the 2015 year differed across the two study populations. The top three diagnosis for the Specialty Managed Medicaid study sample included: Other General Symptoms (ICD-9 780), Schizoaffective Disorder Unspecified (ICD-9 295.70) and Paranoid Schizophrenia Unspecified (ICD-9 295.3). The top three diagnosis for the FFS Medicaid study sample included: Schizoaffective Disorder Unspecified (ICD-9 295.70), ADD of Childhood with Hyperactivity (ICD-9 314.01) and Post Traumatic Stress Disorder (ICD-9 309.81).

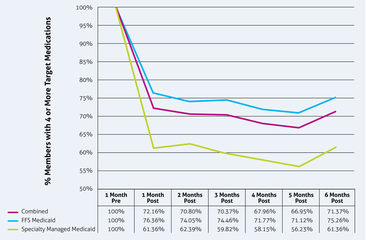
When limiting the data to all pharmacy claims specific to the target drugs, we observed a statistically significant 11.5% reduction in pharmacy spend (p=<0.0001), resulting in an estimated reduction of $1.6 million. The observed reduction in pharmacy spend for the target drugs replicated across the two lines of business (FFS Medicaid, p=<0.0001, Specialty Managed Medicaid, p=0.02). In addition, we observed a 5.5% reduction in utilization specific to the target drugs (p=<0.0001) in the combined subset of patients. In the FFS Medicaid sample, there was a significant 5.5% reduction in utilization for the target medications (p=<0.0001); however, the observed reduction in utilization in the Specialty Managed Medicaid sample was non significant (p=0.055). Lack of replication in the reduction of utilization may be an artifact of the smaller sample size in the Specialty Managed Medicaid sample.

When comparing pre and post utilization, we observed a significant 11.9% reduction in ER utilization and a 9.6% reduction in Inpatient Hospital utilization in the aggregated sample. The observed reduction in both ER and Inpatient utilization significantly replicated across the two lines of business (FFS Medicaid, p=<0.0001, Specialty Managed Medicaid, p=<0.0001). Across both study samples the reduction in ER utilization resulted in a 25.4% reduction in medical spend ($281,142) and the reduction in Inpatient Hospital claims resulted in a 13.4% reduction in medical spend ($814,513). Lastly, at six months post intervention there was a 28% reduction in the number of patients that were prescribed four or more of the target medications (Figure 1).

TABLE 1: Outcome Summary Statistics Stratified by Study Population and Six Month Intervention Period

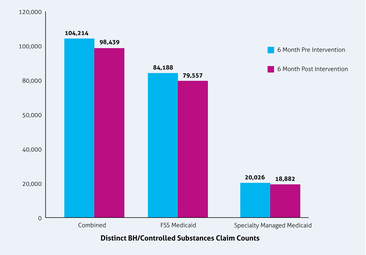
Characteristic	Intervention Period		% Change	*p*-value
	6 Months Pre	6 Months Post		
Distinct Intervened Prescriber Counts	**415**	**415**	**0.00%**	**NA**
FFS Medicaid	226	226	0.00%	NA
Specialty Managed Medicaid	189	189	0.00%	NA
Distinct Patient Counts	**2,787**	**2,784**	**0.00%**	**NA**
FFS Medicaid	2,005	2,005	0.00%	NA
Specialty Managed Medicaid	779	779	0.00%	NA
Pharmacy Spend – BH/ Controlled Substances	**$14,280,012**	**$12,633,775**	**-11.53%**	**<0.0001**
FFS Medicaid	$11,547,640	$10,104,798	-12.49%	<0.0001
Specialty Managed Medicaid	$2,732,372	$2,528,977	-7.44%	0.0197
Distinct Claim Counts – BH/Controlled Substances	**104,214**	**98,439**	**-5.54%**	**<0.0001**
FFS Medicaid	84,188	79,557	-5.50%	<0.0001
Specialty Managed Medicaid	20,026	18,882	-5.71%	0.0548
Medical Spend	**$14,309,803**	**$13,046,876**	**-8.83%**	**<0.0001**
FFS Medicaid	$6,887,177	$6,486,870	-5.81%	0.0001
Specialty Managed Medicaid	$7,422,627	$6,560,006	-11.62%	0.0201
Distinct Claim Counts – Inpatient Hospital	**6,229**	**5,629**	**-9.63%**	**<0.0001**
FFS Medicaid	880	750	-14.77%	<0.0001
Specialty Managed Medicaid	5,349	4,879	-8.79%	<0.0001
Distinct Claim Counts – Emergency Room Hospital	**5,237**	**4,610**	**-11.97%**	**<0.0001**
FFS Medicaid	87	60	-31.03%	<0.0001
Specialty Managed Medicaid	5,150	4,550	-11.65%	<0.0001

FIGURE 1: Percentage of patients with 4 or More BH/Controlled Substances Stratified by Post Intervention Month and Study Population



	1 Month Pre	1 Month Post	2 Months Post	3 Months Post	4 Months Post	5 Months Post	6 Months Post
Combined	100%	72.16%	70.80%	70.37%	67.96%	66.95%	71.37%
FFS Medicaid	100%	76.36%	74.05%	74.46%	71.77%	71.12%	75.26%
Specialty Managed Medicaid	100%	61.36%	62.39%	59.82%	58.15%	56.23%	61.36%

FIGURE 2: Distinct BH/Controlled Substances Utilization Stratified by Study Population and Intervention Period



Discussion

Academic detailing targeted at prescribers had a positive impact on BH polypharmacy within both a FFS Medicaid and Specialty Managed Medicaid population. The observed reductions in BH/controlled substances and ER and Inpatient Hospital utilization may be an artifact of the performed interventions, and prescribers altering their prescribing practices for their identified patients. Whole Health Rx pharmacists are able to serve as an extension of the health plan and cultivate a relationship with the prescribers. The relationships that these pharmacists have formed with these offices and providers has had a positive downstream effect that has extended into the areas of research, helped with the development of appropriate utilization guidelines for BH drugs, and allowed the pharmacists to serve in a consultative capacity for medication management of patients. These activities, though difficult to track, could have an additive benefit to improving the quality of patient care for their clients.

References

1. Kukreja, S., Kalra, G., Shah, N., Shrivastava, A. (2003). Polypharmacy in Psychiatry: A Review. Mens Sana Monographs, 11 (1), pp. 82-99. PMCID: 3653237.
2. Health Research Funding Organization. (2014, September 3). 12 Incredible Polypharmacy Statistics. Retrieved from http://healthresearchfunding.org/polypharmacy-statistics/