Impact of a Psychiatric Pharmacist-Integrated Medication Management Service on Psychotropic Adherence and Clinical Outcomes

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IRB Exempt

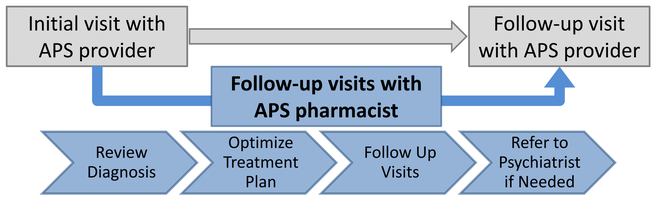
Objective

- Assess the impact of a psychiatric pharmacist-integrated medication management service on psychotropic adherence, clinical improvement, and access to psychiatrist care for patients with any psychiatric diagnosis.

Background

- In the United States, over half of adults with mental health related (MHR) needs do not receive treatment.[1]
- Due to increasing demand, there will be a predicted shortage of over 15,000 psychiatrists in the next five years throughout the nation.[2]
- In 2014, Kaiser Permanente (KP) San Jose (SJO) approved a Dose Titration Psychotropic Protocol allowing clinical pharmacists to autonomously manage psychotropic medications within the adult psychiatric services (APS).

Figure 1: Workflow for APS Patients with Pharmacist Management



Methods

- Study Design: Retrospective, observational study
- Study Period: July 1st, 2018 to July 31st, 2019
- Comparator Period: July 1st, 2013 to July 31st, 2014
- Statistical Tools: Chi-squared and student t-tests, descriptive statistics

Table 1: Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
• ≥18 years of age within the KP SJO Service Area • Baseline Patient Health Questionnaire-9 (PHQ-9) score of 10-27 or Global Distress Score (GDS) of 11-39 • Initial psychiatric visit during study period • At least one active psychotropic prescription	• Non-KP members • Hospice or skilled nursing facility patients • Seen by non-KP psychiatry service with non-KP medication fills • Confirmed pregnant at any time during the study period

Outcomes Evaluated

- Primary Outcomes
  - Number of patients who were adherent to psychotropics (calculated by medication possession ratio of ≥80%)
  - Number of patients reaching clinical improvement defined as:
    - GDS or PHQ-9 at goal (improvement from baseline score by ≥50%)
    - Clinical decision by psychiatrist to extend follow up by ≥6 months
- Secondary Outcomes
  - Mean days to subsequent provider follow up from APS intake visit
  - Mean days to documented clinical improvement by APS provider
  - Total number of MHR emergency visits, hospitalizations, or urgent interventions needed by the crisis intervention team (CIT)
  - Types of pharmacist interventions at first follow-up from initial APS intake visit

Results

Table 2: Baseline Demographics

	Comparator (n = 120)	Intervention (n = 186)	p-value
Age in years (mean ± SD)	40.8 ± 16.1	35.3 ± 15.6	**<0.01**
Female (#, %)	70 (58.3)	116 (62.4)	0.50
Race (#, %)			**0.01**
American Indian	0 (0.0)	1 (0.5)	
Asian	10 (8.3)	20 (10.8)	
Black/African	6 (5.0)	7 (3.8)	
Hispanic/Latino	15 (12.5)	50 (26.9)	
Other	4 (3.3)	9 (4.8)	
Unknown	0 (0.0)	4 (2.2)	
White	85 (70.8)	95 (51.1)	
Initial PHQ-9 Score (mean ± SD)	12.7 ± 5.5	18.3 ± 4.7	0.25
Initial GDS Score (mean ± SD)	20.8 ± 7.7	31 ± 7.0	0.17
MHR Diagnoses Present (#, %)			
1	50 (41.7)	73 (39.2)	0.67
2	46 (38.3)	45 (24.2)	**<0.01**
≥3	24 (20.0)	68 (36.6)	**<0.01**
Active Psychotropics (#, %)			
1	55 (45.8)	101 (54.3)	0.15
2	45 (37.5)	62 (33.3)	0.46
≥3	20 (16.7)	23 (12.4)	0.30

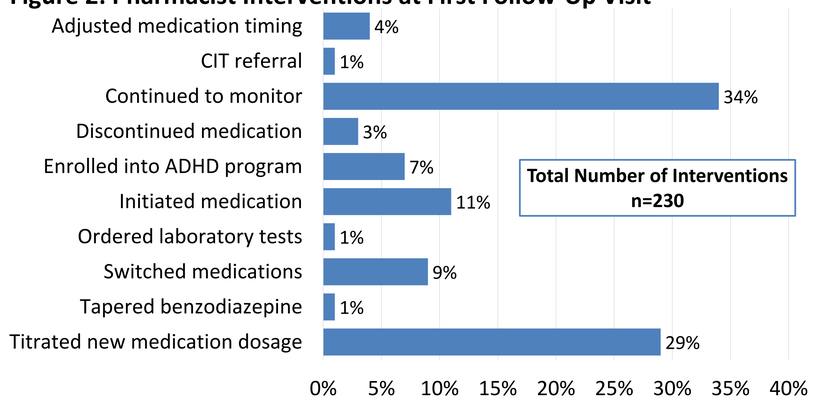
Table 3: Primary Outcomes

	Comparator (n = 120)	Intervention (n = 186)	p-value
Adherent to Psychotropics (#, %)	75 (62.5)	133 (71.5)	0.10
Reached Clinical Improvement (#, %)	80 (66.7)	133 (71.5)	0.37

Table 4: Secondary Outcomes

	Comparator (n = 120)	Intervention (n = 186)	p-value
Days to First Follow-Up (mean ± SD)	50.4 ± 42.9	30.3 ± 28.9	**<0.01**
Days to Clinical Improvement (mean ± SD)			
GDS or PHQ-9 at Goal	317.0 ± 327.5	96.4 ± 91.4	**<0.01**
Considered Stable by Physician	461.3 ± 447.1	110.1 ± 112.5	**<0.01**
MHR Emergency Visits (#)	4	2	0.30
MHR Hospital Admissions (#)	0	1	0.32
MHR CIT Encounters (#)	4	11	0.30

Figure 2: Pharmacist Interventions at First Follow-Up Visit



Key Abbreviations

ADHD = attention deficit hyperactivity disorder; APS = adult psychiatry services; CIT = crisis intervention team; GDS = global distress score; KP = Kaiser Permanente; PHQ-9 = patient health questionnaire-9; SD = standard deviation

Discussion

- Higher percentage of MHR diagnoses present could be associated with variations in ICD documentation between the two time periods. Other differences were either not noted or not shown to be clinically significant.
- Primary endpoints did not show any difference in clinical and adherence outcomes.
- Secondary endpoints showed the following:
  - Significantly less wait time for patients to be seen by a provider for reassessment or documentation of clinical improvement
  - Incidents of hospitalizations, emergency department encounters, and CIT visits were too infrequent to reach statistical significance
- Types of interventions were primarily titration of psychotropic medications, initiation of adjunctive therapy, or monitoring of clinical response through further scheduled follow up with psychiatric pharmacists.
- Future study direction could include expansion of the study time frame to capture a larger study population.

Strengths and Limitations

- Strengths of this study include including all patients in APS (and not just those diagnosed with depression) along with a replicable study design.
- Limitations include the following:
  - Short study period; insufficient number of patients to allow for power
  - Unequal baseline characteristics
  - Did not account for non-pharmacologic interventions
  - Potential differences in provider workflow and standard of care from historical and intervention group

Conclusion

- No difference in primary outcomes of adherence and clinical improvement
- Integration of pharmacists allowed for decreased wait time to follow-up reassessment by up to 20 days
- Pharmacists can assist in optimizing regimens and assessing clinical improvement in a timely manner

Disclosure

The author of this presentation has nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.

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