

Impact of an ambulatory care pharmacist in psychiatric patient care

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Abstract #208

DISCLOSURE STATEMENT

- IRB status: Exempt
- Co-Investigators:
 - Pamela Melton, PharmD, BCACP, CPP
 - Anne Daniels, PharmD
 - Taylor Sandvick, PharmD, BCPS
 - Brad Hornung, RPh, BCPS
 - Andrea Mow, D.O.
 - Mark Mozer, M.D.
- Conflicts of interest: None
- Project sponsorship: None

IRB: Institutional Review Board



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LEARNING OBJECTIVES

- Recognize psychiatric patients who may benefit from a pharmacist driven ambulatory care visit regarding metabolic management, medication intervention, and education based on the recommendations from the 2004 consensus for metabolic monitoring by the American Psychiatric Association, American Diabetes Association, American Association of Clinical Endocrinologists, and the North American Association for the Study of Obesity¹
- Identify metabolic disturbances related to second-generation antipsychotics (SGAs)



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ST. PETER'S HEALTH – MEDICAL GROUP



St. Peter's Health – Medical Group North Clinic



St. Peter's Health – Medical Group Broadway Clinic



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BACKGROUND

- 1 in 25 Americans are diagnosed with a serious mental illness, such as schizophrenia, bipolar disorder, or major depression²
- Adults living with severe mental illness die on average 25 years earlier than others²
 - Largely due to chronic disease state progression
- Pharmacists have been shown to improve outcomes when involved in the care of the mental health population in ambulatory care settings³



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BACKGROUND

- SGAs are associated with undesirable side effects¹
 - Obesity
 - Diabetes
 - Dyslipidemia
- Metabolic disturbances associated with SGAs differ from agent to agent^{1,4}
- Exploratory study of 29 patients at St. Peter's Health found that there was significant opportunity to improve medication management therapy for those receiving SGAs:
 - Waist circumference (0% - no tracking capability)
 - Glycemic control (61% adherent)
 - Dyslipidemia (64% adherent)

SGAs: second-generation antipsychotics



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PURPOSE

- Evaluate the impact of a clinical ambulatory care pharmacist's interventions on psychiatric patient care, with particular focus on metabolic monitoring adherence and cardiovascular risk reduction

METHODS: STUDY DESIGN

- Single-center study conducted at St. Peter's Health – Medical Group of Helena, Montana
- Prospective study with an intervention period between January 1st, 2019 – April 15th, 2019
- Utilized established clinical ambulatory care pharmacist practice to implement study interventions

METHODS: INCLUSION CRITERIA

Table 1: Inclusion Criteria

Patient ≥ 18 years old
Patients diagnosed with a mental illness or disorder
Patients must have been on at least 3 medications, with one medication is classified as a(n):
<ul style="list-style-type: none"> - Antipsychotic - Antidepressant - Mood Stabilizer - Benzodiazepine
Patients seen by primary care provider within the St. Peter's Health – Medical Group

METHODS: EXCLUSION CRITERIA

Table 2: Exclusion Criteria

Patients diagnosed with a current substance use disorder
Patients managed by a primary care provider outside the St. Peter's Health – Medical Group

METHODS: STUDY GROUPS

- Pre-intervention group
 - Patients managed by psychiatric care providers at St. Peter's Health – Medical Group
- Post-intervention group
 - Patients referred to the clinical ambulatory care pharmacists during the intervention period

METHODS: STUDY GROUPS

- Intervention Workflow:
 - Step 1: Patient referred from provider to clinical pharmacist
 - Step 2: Clinical pharmacist contacts patient to schedule an appointment
 - Step 3: Appointment conducted with focus on adherence to laboratory monitoring and medication questions

METHODS: PRIMARY OUTCOME

- Assess the impact of referrals to clinical ambulatory pharmacist on compliance with metabolic monitoring standards of care recommendations for patients prescribed SGA therapy.

SGA: second-generation antipsychotics

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METHODS: PRIMARY OUTCOME

Table 3: Metabolic Monitoring Parameters with SGAs¹

	Baseline	4 Weeks	8 Weeks	12 Weeks	Quarterly	Annually	Every 5 Years ²
Blood Pressure	X			X		X	
Fasting Plasma Glucose or Hemoglobin A1c	X			X		X	
Fasting Lipid Panel	X			X			X
Personal/Family History	X					X	
Waist Circumference	X					X	
Weight	X	X	X	X	X		

¹More frequently if clinical indicated

SGAs: second-generation antipsychotic

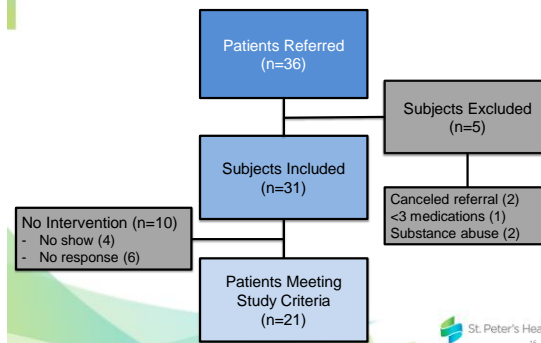
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METHODS: SECONDARY OUTCOMES

- Report the frequency and type of clinical interventions made by pharmacists during the study period
- Assess the impact ambulatory pharmacist referrals have on cardiovascular risk monitoring and medication management
- Assess provider satisfaction with care provided by ambulatory clinical pharmacists for referred patients

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RESULTS: STUDY SUBJECTS



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RESULTS: BASELINE CHARACTERISTICS

Baseline Characteristics	Final Intervention Group (n=21)
Age (years), mean ± SD	55 ± 14
Female, n (%)	13 (62%)
# of Psychiatric Medications, mean ± SD	3.2 ± 1.5
# of Antipsychotic Medications, mean ± SD	1 ± 0.6
Patients on Benzodiazepines, n (%)	6 (28%)

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RESULTS: BASELINE CHARACTERISTICS

Disease States, n (%)	Final Intervention Group (n=21)
Anxiety	12 (57%)
Bipolar	10 (48%)
Depression	10 (48%)
OCD	2 (9%)
Other*	5 (24%)
PTSD	0 (0%)
Schizophrenia	3 (14%)

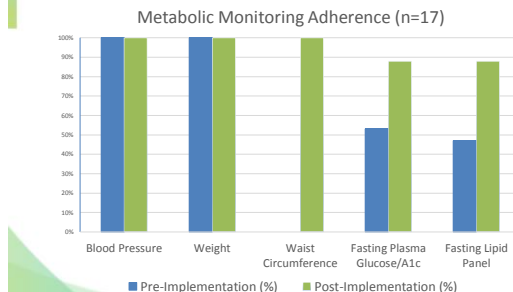
*borderline personality disorder, ADHD, neuralgia, insomnia

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RESULTS: BASELINE CARDIOVASCULAR CHARACTERISTICS

Cardiovascular Characteristics, n (%)	Final Intervention Group (n=21)
Diabetes	10 (48%)
Dyslipidemia	13 (62%)
Hypertension	13 (62%)
Obese (BMI ≥ 30)	10 (48%)
Smoker (active)	8 (38%)

RESULTS: PRIMARY OUTCOME



RESULTS: SECONDARY OUTCOMES

Medication Interventions (n = 81)	
Intervention Category	Intervention Description
Adverse Drug Reaction (n=13)	Recommended OTC solution to opioid-induced constipation Twenty-five pound weight gain related to SGAs usage Dose reduced metformin for intolerable diarrhea
Drug-Drug Interaction (n=1)	Multiple sleep aids with potential for CNS depression
Education (n=21)	Onset of action with antidepressants
Metabolic Monitoring (n=17)	One patient found to be pre-diabetic (A1c: 6.4% and FBG: 112) provided with weight and diet resources
Non-adherence (n= 4)	Connected patient with medication assistance,
Other (n=3)	Antidepressant taper recommendations and education Management of insomnia regimen
Medication Reconciliation (n=12)	Weight Management (n=2)
Poly-Pharmacy (n=8)	

RESULTS: SECONDARY OUTCOMES

Cardiovascular Risk Factor Interventions			
Intervention	Clinical intervention completed (#)	Patients eligible (n)	Percentage of clinical intervention (%)
Primary or secondary CVA prevention with aspirin	1	3	33%
Smoking cessation	3	6	50%
Statin therapy initiation (dyslipidemia/prevention)	2	5	40%

RESULTS: SECONDARY OUTCOMES

- Satisfaction of the following categories related to psychiatric care:
 - Availability (30/30)
 - Response time (30/30)
 - Interventions or recommendations (30/30)
 - Referral process (29/30)
 - Overall satisfaction with the clinical pharmacists related to inquires (30/30)
- Comments:
 - "Easily approachable. Quick response and recommendation for treatment options. Knowledgeable and very helpful"

DISCUSSION: INTERPRETATION OF RESULTS

- Pharmacists can positively impact metabolic monitoring standards of care in patients taking SGAs, particularly with screening for obesity, diabetes, and dyslipidemia
- Pharmacists can improve adherence rates to aspirin and statin therapies
- Comparable to previous studies, clinical pharmacists are impactful in psychiatric patient care^{5,6}

DISCUSSION: STRENGTHS

- Expanded care to an underserved population
- Established collaborative practice agreements, allowing for immediate medication interventions
- Expanded clinical ambulatory care pharmacist's scope of practice
- Generated a pathway for electronic referrals to ambulatory care pharmacists
- Navigated transitions of care from the Behavioral Health Unit (inpatient) to St. Peter's Health – Medical Group (outpatient)
- Strengthened provider-pharmacist relationships



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DISCUSSION: LIMITATIONS

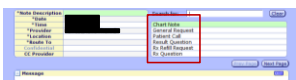
- Small sample size
- Short duration of study
- No show appointments, unreachable patients
- Technological delay to hardwire referral process
- Provider involvement



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DISCUSSION: LESSONS LEARNED

- Hardwire a direct referral process and provide education to providers on process



- Be proactive for patient recruitment
- Allow for optimal data collection time (≥ 1 year)
- Educate, educate, and educate again!



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CONCLUSIONS

- Clinical pharmacists can positively impact the care of patients diagnosed with psychiatric conditions and/or those receiving SGA therapy

- Assisting with metabolic monitoring
- Recognizing potentially harmful drug-drug interactions
- Managing adverse effects related to SGA therapy
- Formulating connections between patients and resources for cost management, weight control, and smoking cessation



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FUTURE DIRECTIONS/FOLLOW-UP

- Launch cardiovascular risk reduction collaborative practice agreement with providers
- Create collaborative practice agreements to include management of:
 - Cross-taper of antidepressants
 - Taper off benzodiazepines
 - Weight management
- Evaluate how to enhance physical presence of ambulatory pharmacists with psychiatrists' practice



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QUESTIONS?

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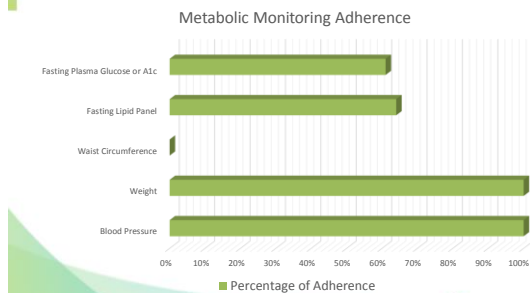
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SUPPLEMENTAL MATERIAL

Retrospective Data
Antipsychotics and side effects

SUPPLEMENTAL MATERIAL: RETROSPECTIVE DATA



SUPPLEMENTAL MATERIAL: ANTIPSYCHOTICS

Table 6: Particular SGAs and Associated Metabolic Abnormalities^{1,7}

Drug	Weight Gain	Risk for Diabetes	Worsening Lipid Panel
Clozapine	+++	+	+
Olanzapine	+++	+	+
Risperidone	++	+++	+
Quetiapine	++	+++	+++
Aripiprazole	+/-	-	-
Ziprasidone	+/-	-	-/+

+ = increase effect; - = no effect; +/- = little to no effect

St. Peter's Health

Provider (optional) _____

Provider Satisfaction Survey

Topic: Pharmacist involvement with **psychiatric care**

Response Scale:
 1 = Dissatisfied/Disagree
 2 = Somewhat Dissatisfied/Somewhat Disagree
 3 = Neutral
 4 = Somewhat Satisfied/Somewhat Agree
 5 = Very Satisfied/Agree

Disatisfied | Very Satisfied

Question 1: How satisfied are you with the availability of the clinical pharmacist in assisting with questions related to **psychiatric care**?

Question 2: How satisfied are you with the clinical pharmacist's response time to inquiries related to **psychiatric patients**?

Question 3: How satisfied are you with the interventions or recommendations made by the clinical pharmacist related to **psychiatric patient care**?

Question 4: How satisfied are you with the **general process** from your practice to the clinical pharmacist?

Question 5: What is your overall satisfaction with the clinical pharmacist regarding **psychiatric care** related inquiries?

Comments (describe good or bad experience):

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