

Metabolic Monitoring in Patients Taking Antipsychotic Medications



Emily Evan, PharmD

Ally Taubenheim, RN, PHN, BSN, DNP Candidate 2022

CUHCC RSS

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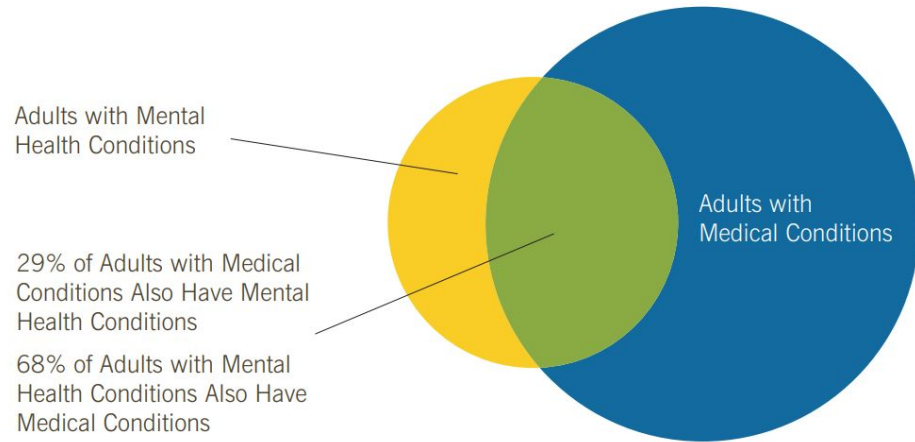
Objectives

1. Discuss the recommended metabolic monitoring parameters for patients who take antipsychotic medications
2. Explain the importance of completing this monitoring
3. Discuss residency project results
4. Review three CUHCC patient cases

Background

Individuals with behavioral health conditions frequently have co-occurring physical health conditions.

Chart 2: Percentage of Adults with Mental Health Conditions and/or Medical Conditions, 2001-2003



Source: Druss, B.G., and Walker, E.R. (February 2011). *Mental Disorders and Medical Comorbidity*. Research Synthesis Report No. 21. Princeton, NJ: The Robert Wood Johnson Foundation.

Recommended Monitoring Parameters

BASELINE

- Personal & family history
- Weight & height
- Waist circumference
- Blood pressure
- Fasting plasma glucose
- Fasting lipid profile

FOLLOW-UP

- Weight
 - Reassessed at 4, 8, and 12 weeks and quarterly thereafter
- Glucose, lipids, blood pressure
 - Reassessed 3 months and annually thereafter
 - If normal lipid profile, repeat testing at 5 year intervals or more frequently if clinically indicated

Importance

- Antipsychotic metabolic adverse effects are well-established
 - Metabolic syndrome: 23-50%
 - Weight gain or obesity: 6-55%
 - Type 2 diabetes: 2-28%
 - Dyslipidemia: 15-53%

TABLE 2. Antipsychotics and metabolic abnormality risk in adults^a

Antipsychotic	Weight gain	Risk for diabetes or worsening lipid profile
Atypical		
Clozapine	Severe	Severe
Olanzapine	Severe	Severe
Quetiapine	Intermediate	Significant
Risperidone	Intermediate	Low or neutral
Paliperidone	Intermediate	Low or neutral
Iloperidone	Intermediate	Low or neutral ^a
Asenapine	Intermediate	Low or neutral ^a
Lurasidone	Low or neutral	Low or neutral ^a
Aripiprazole	Low or neutral	Low or neutral
Ziprasidone	Low or neutral	Low or neutral
Typical		
Chlorpromazine	Significant	Significant ^a
Thioridazine	Intermediate ^a	Significant ^a
Haloperidol	Intermediate	Low or neutral
Fluphenazine	Low or neutral ^a	Low or neutral ^a
Perphenazine	Low or neutral ^a	Low or neutral

Note comparative data are limited and risk varies based on individual factors, including time exposed to a given antipsychotic or whether concomitant drugs are prescribed.

^a More data needed.

Importance

- Current screening practices are inadequate
 - Lack of awareness, unclear responsibility, difficult collaboration between primary and psychiatric care, and severity of psychiatric conditions
- Variety of interventions have been studied
 - Provider education, targeting patients, improving systems
- 2015 quality improvement project on this topic improved monitoring rates by 20%

Project Aim

The aim of the current project is to increase compliance by 20% for clinically appropriate monitoring in CUHCC patients on long-acting injectable antipsychotic medications by March 15th, 2021.



TIMELINE



Results

- 55 patients with active long-acting injectable antipsychotic medication orders
 - **0 of 55** patients received all monitoring at baseline
 - Excluding waist circumference, **10 (18%)** did
 - After the intervention, 13 patients (**23%**) had received each of the monitoring parameters
 - 8 of these patients receive primary care at CUHCC
- **10** patients met criteria for metabolic syndrome
 - 5 had received all recommended monitoring

Results

Patient Race/Ethnicity

	Overall patients	Number of patients with up-to-date monitoring	Percentage of patients with up-to-date monitoring
Black	37	9	24%
White/Nonhispanic	8	1	12%
Asian	4	1	25%
American Indian	3	1	33%
White/Hispanic	2	1	50%
Unknown	1	0	0%

Results

Primary Psychiatry Provider

Primary Psychiatry Provider	Total patients	Number of patients with up-to-date monitoring	Percentage of patients with up-to-date monitoring
A	15	4	27%
B	13	3	23%
C	1	0	0%
D	5	1	20%
E	4	2	50%
F	3	0	0%
G	9	2	22%
H	2	0	0%
I	2	0	0%
J	1	1	100%

Discussion

- Positive impacts
 - Project aim of increasing clinically appropriate metabolic monitoring by 20% was met
 - Coordinating care
 - Well-received by patients anecdotally
- Limitations
 - COVID-19
 - Frequent travel
 - Time constraints and difficult follow-up
 - Selection bias

Discussion

- Waist circumference
 - Barrier prior to and throughout the project
 - Research demonstrates importance
 - 25% increased mortality risk
 - 20% increased mortality risk persists even with normal BMI
 - Regardless of prevalent disease, smoking status, race/ethnic group

Next steps



Update protocol- adjusting lipid monitoring frequency



Clinical decision support tools



Continued review and education

Nursing note template

*** presents to clinic for administration of LAI: ***

Last injection given on ***, so patient is {SA124 LAI Due/Overdue:43588}

Lab Monitoring:

	BH/MH Visits from 6/3/2021 in CUHCC Mental Health
BP	137/85
Pulse	105 !
Resp	18
Weight	210 lb (95.3 kg)
Height	—
Ideal Body Weight (kg)	—
Body Mass Index Calculated	—
Basal Metabolic Rate	—
Pulse Score	2
Pct Wt Change	—

Lab Results

Component	Value	Date
HGBA1C	11.5 (H)	02/15/2021

Lab Results

Component	Value	Date
TRIGLYC	163 (H)	07/08/2020
CHOL	192	07/08/2020
HDL	35 (L)	07/08/2020
LDL	125 (H)	07/08/2020
NONHDL	158 (H)	07/08/2020

No results found for: WBC, NEUTROPHILS, LYMPHOCYTES, MIDRANGE, RBC, HGB, HCT, MCV, MCH, MCHC, RDW, PLATELETS, MPV, MONOCYTES, MONOCYTESPCT, EOSINOPHILS, BASOPHILS, BASOPHILSPCT, MONONUCLEAR, BANDS

RN Mental Status Assessment

Overall Appearance: {appearance:11064::0}

Behavior and Manner: {behavior:11068::0}

Affect: {affect:11069::0}

Motor Activity: {motor activity:11071::0}

Speech: {speech:11073::0}

Eye Contact: {eye contact:11074::0}

Reported Mood: {reported mood:11075::0}

Thought Content: {thought content:11076::0}

Thought Process: {thought process:11079::0}

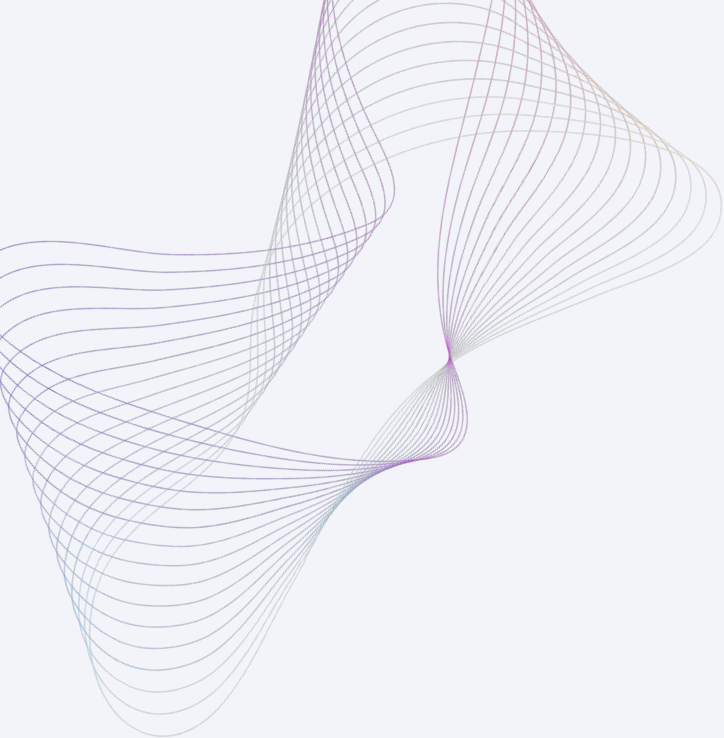
Perception: {perception:11078::0}

Orientation: {oriented to:11081::0}

Insight: {insight:11083::0}

Judgement: {judgement:11084::0}

Administered injection, patient tolerated well. Given without difficulties. Walked pt out to schedule next nurse only appt for administration of LAI.



PATIENT #1

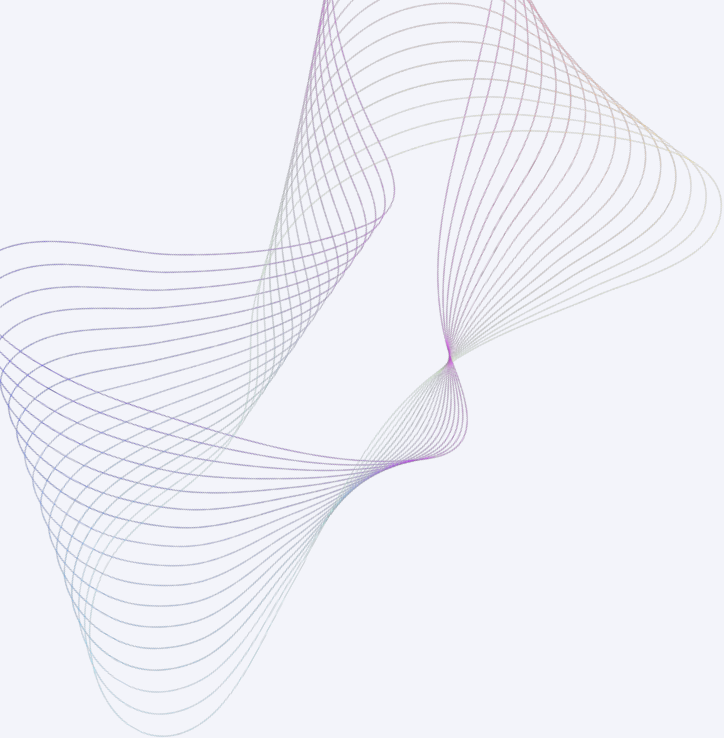
February

BP 158/100
A1c 7.6%
TGs 456, LDL 169

April

Phone visit with PCP
Adherence discussed

Age: 44
Gender: Male
Diagnosis: Paranoid
schizophrenia
Medication: haldol
decanoate q 28 days



PATIENT #2

Age: 34
Gender: Male
Diagnosis: Bipolar
affective disorder
Medication: Abilify
Maintena q 30 days

April

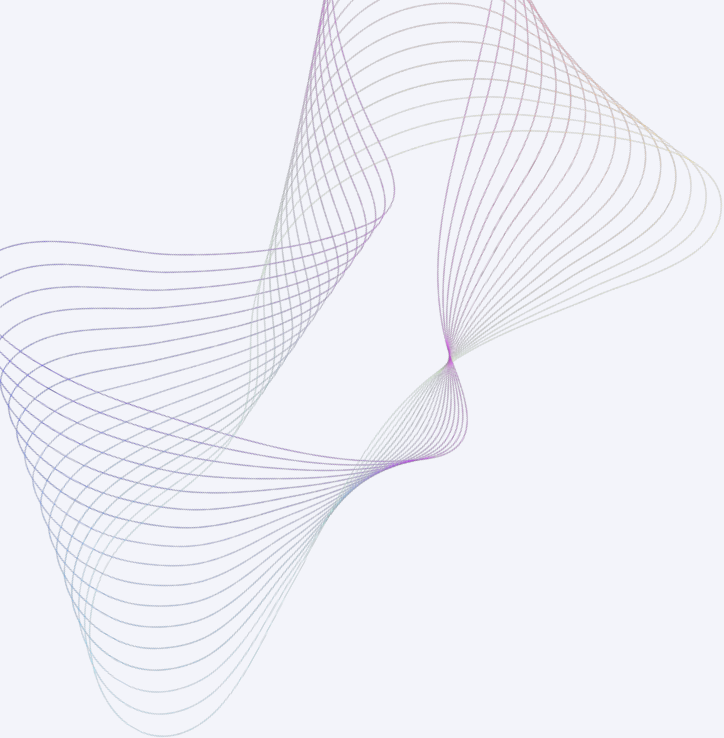
SCr 1.49
TGs 211

April

Established care with
medical provider

May

Completed COVID
vaccine series



PATIENT #3

Age: 57
Gender: Male
Diagnosis: Paranoid
schizophrenia
Medication: Invega
Sustenna q 28 days

February

A1c 8.5%
TGs 229, LDL 104

March

Follow-up with medical
provider

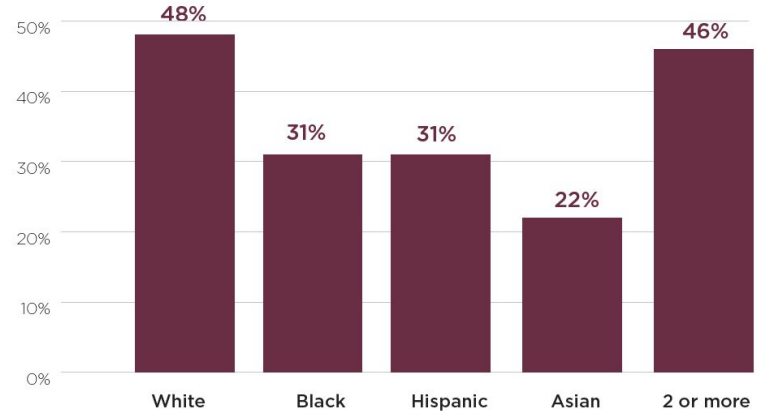
April

Completed COVID
vaccination

Lessons learned

- Health Equity
- Team-based Care
- Comprehensive Care
- Practice Management

Among People with Any Mental Illness, Percent Receiving Services, 2015



Source: Substance Abuse and Mental Health Services Administration. National Survey on Drug Use and Health. 2008-2015.

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THANKS

Questions?

evanx013@umn.edu
taube032@umn.edu

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