ACADEMY OF CONSULTATION-LIAISON PSYCHIATRY

Clinical module activity to satisfy the
Improvement in Medical Practice requirement (PIP)
Part IV of the Continuing Certification/ MOC Program

Side Effect Screening for Patients Taking Antipsychotic Medications

Academy of Consultation-Liaison Psychiatry
Education Committee
Maintenance of Certification Subcommittee
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Side Effect Screening for Patients Taking Antipsychotic Medications

This activity is meant to facilitate the completion of an Improvement in Medical Practice (PIP) activity for the American Board of Psychiatry and Neurology Part IV of the continuing certification/ MOC program.

The following three steps must be completed within a 24-month:

“Step A: Initial assessment of five patient charts

- Collect data from at least five of your own patient charts in a specific category (diagnosis, type of treatment, or treatment setting) obtained from your practice over the previous three-year period.
- Compare the data from the five patient cases with published best practices, practice guidelines, or peer-based standards of care (e.g., hospital QI programs, standard practice guidelines published by specialty societies), using a minimum of four quality measures.
- For completion of this step use attached worksheet.

Step B: Identify and Implement Improvement

- Based on results from chart reviews, develop and carry out a plan to improve effectiveness and/or efficiency of your medical practice.
- If no areas for improvement are determined based on initial assessment, then maintenance of performance in medical practice should be reassessed in Step C.

Step C: Reassessment of five patient charts

- Within 24 months of initial assessment, collect data from another five of your own patient charts (may use same or different patients).
- Use the same category and practice guidelines for the initial assessment and reassessment steps. (ABPN 2024)”
- For completion of this step use attached worksheet.

Upon completion of this activity:

- Update folios in the ABPN website to reflect completion of this activity and stay up to date with MOC.
- Keep materials for future reference and to document completion of the activity.

Worksheet for Step A and C

	Patient					Total	Recommendations and Clinical Resources
	1	2	3	4	5		
Minimize use of multiple antipsychotics							
Is the patient currently prescribed only one antipsychotic medication, including both standing and as-needed (PRN) medications?	☐	☐	☐	☐	☐	/5	UK National Institute for Health and Care Excellence (NICE) guidance and VA/DoD Clinical practice guidelines recommend minimizing use of multiple antipsychotic medications due to potential increased risk of side effects.
If using more than one antipsychotic medication, did you document your clinical rationale for use of multiple antipsychotics?	☐	☐	☐	☐	☐	/5	
Screening for QTc prolongation							
Did you document the patient's risk factors for QTc prolongation?	☐	☐	☐	☐	☐	/5	Risk factors for QTc prolongation include age, female sex, structural cardiovascular disease, congenital long QTc syndrome, electrolyte abnormalities (potassium, calcium, magnesium), and certain medications. (Beach 2013)
If the patient has multiple risk factors for QTc prolongation or is prescribed a high-risk antipsychotic medication, did you obtain an ECG at baseline and document the QTc in the record?	☐	☐	☐	☐	☐	/5	Antipsychotic medications associated with the *greatest* degree of QTc prolongation are thioridazine, ziprasidone, and iloperidone. (Huhn 2019) Antipsychotic medications associated with the *least* degree of QTc prolongation (or no QTc prolongation) include lurasidone, brexpiprazole, and aripiprazole. (Huhn 2019) Though the FDA has issued a black box warning for intravenous haloperidol, prospective observational and randomized controlled trials suggest it leads to similar amounts of QTc prolongation as other antipsychotic medications. (Huhn 2019, Beach 2020)
If the patient has multiple risk factors for QTc prolongation or is prescribed a high-risk antipsychotic medication, did you obtain an ECG after a change in risk factors (e.g., increased dose of antipsychotic medication, new QTc-prolonging medication) and document it in the medical record?	☐	☐	☐	☐	☐	/5	If an ECG is not accessible, it is important to consider the risks and benefits of the antipsychotic medication. Treatment should not be withheld if there is substantial risk without treatment. (Funk 2020)
When correcting the QT interval for heart rate, did you use a linear correction formula, such as the Hodges or	☐	☐	☐	☐	☐	/5	The American Heart Association recommends using a linear formula (e.g., Hodges or Framingham) when

Framingham formula, or the Fridericia formula?							correcting the QT interval for heart rate (Rautaharju 2009). QTc (Framingham) = QT + 0.154 * (1000 - RR) QTc (Hodges) = QT + 1.75 * (HR - 60) QTc (Fridericia) = QT / $\sqrt[3]{RR}$ When using the Framingham or Hodges formula, intervals are measured in milliseconds. (Luo 2004) When using the Fridericia formula, intervals are measured in seconds.
Screening for Metabolic Side Effects The following recommendations regarding frequency of monitoring are based on APA recommendations, however there is no absolute recommended interval. Regular monitoring intervals should be based on the specific clinical circumstance including polypharmacy, physical comorbidities, and side effects for an individual patient (Keepers 2020). Furthermore, recommendations are based on treatment of schizophrenia and there is limited data on the risk of side effects when antipsychotics are used for other indications.							
Did you check **weight** and height at baseline and calculate body mass index (BMI) at baseline, at every visit following antipsychotic initiation for 6 months, then at least every 3 months?	☐	☐	☐	☐	☐	/5	
Did you screen for **diabetes** risk factors?	☐	☐	☐	☐	☐	/5	Risk factors for diabetes mellitus include: BMI >25 (>23 in Asian American individuals), first-degree relative with diabetes, physical inactivity, being a member of a high-risk ethnic population (African American, Hispanic, American Indian, Asian American, Pacific Islander), history of cardiovascular disease, hypertension, dyslipidemia (HDL <35 mg/dL and/or triglyceride level >250 mg/dL), history of associated condition (polycystic ovary syndrome, gestational diabetes, acanthosis nigricans, pancreatitis), high risk medications (American Diabetes Association 2024).
Did you check fasting **glucose** or A1C when starting an antipsychotic, at 4 months, then annually?	☐	☐	☐	☐	☐	/5	APA recommends baseline fasting glucose and either fasting glucose or A1C used for follow up testing. While fasting glucose >125 mg/dL, A1C ≥ 6.5% are most common, you may also use oral glucose challenge test or random non-fasting glucose of >200 mg/dL. (Keepers 2020) Fasting glucose is preferred for patients with hemoglobinopathies, hemodialysis, recent blood loss, transfusion, erythropoietin therapy, 2nd and 3rd trimester pregnancy, HIV (American Diabetes Association 2024).

							If repeat testing remains positive or associated with symptoms, APA recommends referring patient for further medical evaluation and treatment (Keepers 2020).
Did you check a **lipid panel** when starting an antipsychotic, at 4 months, then annually?	☐	☐	☐	☐	☐	/5	Non-fasting lipids are appropriate for most patients, unless they have a family history of premature atherosclerotic cardiovascular disease or genetic hyperlipidemia (Grundy, 2018).
Did you determine if your patient started on an antipsychotic meets criteria for **metabolic syndrome** at baseline, after 4 months, then annually?	☐	☐	☐	☐	☐	/5	The most widely used criteria for metabolic syndrome requires the presence or treatment of at least three of the following five risk factors: fasting glucose ≥100mg/dL, low HDL (men: <40 mg/dL, women: <50mg/dL), triglycerides ≥ 150 mg/dL, elevated waist circumference (men: >102 cm [40.2 inches], women: >88 cm [34.6 inches]); blood pressure ≥130/85 mmHg (Grundy, 2005).
Screening for Extrapyramidal Side Effects							
Did you screen for an adverse event of **acute dystonia** at each visit, and (if identified), reduce dose, change antipsychotic medications, and/or treat with an anticholinergic agent?	☐	☐	☐	☐	☐	/5	APA recommends (1C) the use of anticholinergic medications for acute dystonia due to antipsychotic medications. The anticholinergic medication might need to be continued to prevent recurrence or until the dose of the antipsychotic medications has been reduced or changed to another antipsychotic medication that is associated with a low risk for acute dystonia (Keepers 2020).
Did you screen for **parkinsonism** at each visit, and (if identified), reduce dose, change antipsychotic medication, and/or treat with an anticholinergic agent?	☐	☐	☐	☐	☐	/5	APA suggests (2C) patients who have antipsychotic medication-induced parkinsonism to either reduce the dosage of the antipsychotic medication, change to another antipsychotic medication, or treat with an anticholinergic medication (Keepers 2020).
Did you screen for **akathisia** at each visit, and (if identified), reduce dose, change antipsychotic medication, and/or treat with a benzodiazepine or beta-blocker?	☐	☐	☐	☐	☐	/5	APA suggests (2C) that when akathisia occurs, one should consider reducing the dosage of the antipsychotic medication, changing to another antipsychotic medication, or adding a benzodiazepine or a beta-adrenergic blocker medication (Keepers 2020).
Did you document the patient's risk factors for **tardive dyskinesia?**	☐	☐	☐	☐	☐	/5	Risk factors include age greater than 55 years; female sex; white or African race/ethnicity; presence of a mood disorder, intellectual disability, or central nervous system injury;

							diabetes; alcohol and other substance use disorders; and past or current akathisia, clinically significant parkinsonism, or acute dystonic reactions (Patterson-Lomba et al. 2019; Saklad. 2020).
Did you use structured instruments (e.g., AIMS, DISCUS) to assess and document for **tardive dyskinesia** at baseline (if able), at least every 6 months in a patient with ≥ 2 risk factors and every 12 months in a low-risk patient?	☐	☐	☐	☐	☐	/5	Tardive dyskinesia affects 20%-30% of patients who have been treated for months or years with neuroleptic medications (Carbon 2017) If a patient is prescribed an antipsychotic, the APA recommends assessment with a structured instrument for tardive dyskinesia (e.g., AIMS, DISCUS) at a minimum of every 6 months in patients at high risk of tardive dyskinesia, at least every 12 months in other patients, and if a new onset or exacerbation of preexisting movements is detected at any visit (Keepers 2020)
Did you recommend or attempt to initiate a VMAT2 inhibitor in a patient with moderate to severe **tardive dyskinesia**?	☐	☐	☐	☐	☐	/5	APA recommends (1B) that patients who have moderate to severe or disabling tardive dyskinesia associated with antipsychotic medication be treated with a reversible inhibitor of the vesicular monoamine transporter 2 (VMAT2) (Keepers 2020).

Abbreviations: A1C: Hemoglobin A1C, APA: American Psychiatric Association, AIMS: Abnormal Involuntary Movement Scale, BMI: Body Mass Index, DISCUS: Dyskinesia Identification System: Condensed User Scale, ECG: Electrocardiogram, FDA: Food and Drug Administration, HDL: High Density Lipoprotein, HIV: Human Immunodeficiency Virus, NICE: National Institute of Health & Care Excellence, VA/DoD: Veteran's Affairs/Department of Defense, VMAT2: Vesicular Monoamine Transporter 2.

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