
Metabolic Syndrome on the Inpatient Unit

Last updated October 2023

Introduction: Metabolic syndrome is a cluster of conditions that increase the risk of cardiovascular diseases, diabetes, and stroke. It includes increased abdominal fat, high blood sugar levels, high triglyceride levels, low HDL cholesterol levels, and elevated blood pressure. The Centers for Medicare and Medicaid Services (CMS) requires that inpatient psych units monitor any patient taking antipsychotics for these conditions. The purpose of this fact sheet is to make sure you know how to do this monitoring correctly—and how to mitigate these health problems in your patients.

Monitoring requirements and recommendations

- CMS requires for any patient on antipsychotics, even on those agents with a very low risk of causing problems, such as aripiprazole, ziprasidone, or lurasidone. The following four measurements must be documented within the last year (you don't have to re-order them if recent results are already in the chart)
 - BMI (typically this will be calculated automatically by EHRs based on your patient's admission height and weight)
 - Blood pressure (this is usually obtained daily by nursing staff)
 - Glucose or HbA1c
 - Full lipid panel (cholesterol, triglyceride, LDL, HDL)
- Metabolic syndrome occurs even in the absence of weight gain, but the risk of developing metabolic syndrome and the severity of metabolic abnormalities tend to be more pronounced in patients who experience significant weight gain while on antipsychotic medications.
- Early changes in weight or metabolic parameters predict those at higher risk of developing full-blown metabolic syndrome.
- Watch for new-onset Type 2 Diabetes in patients on antipsychotics, especially if they exhibit signs like increased thirst, frequent urination, or unexplained weight loss.

Recommended actions if patient has metabolic syndrome

- **Education.** Educate your patient about any abnormal results and suggest things they should do
 - Explain what metabolic syndrome is and what the health risks are
 - Give them a fact sheet on the issue (you can use our fact sheet [here](#))
 - Very important: Make sure they talk to their primary care doctor about the problem next time they see them.
- **Nutrition consultation.** A hospital dietitian/nutritionist will likely recommend things like reducing sodium and refined carbs; increasing intake of lean sources of protein like poultry, fish and lentils; choosing healthy fats like olive oil and avocado; and boosting fiber intake.
- **Exercise.** Encourage your patient to participate in any exercise program you have in your hospital.
- **Switch medications.** If possible, switch to an antipsychotic with less risk of metabolic syndrome (e.g., aripiprazole, lurasidone).
- **Treat metabolic syndrome.** Start one of a range of medications that are helpful in treating aspects of metabolic syndrome.
 - Metformin XR (Glucophage XR, Glumetza) 500-2000 mg; split into two doses if needed based on GI side effects.

- Topiramate (Topamax): Begin with 25 mg daily and can titrate up, but be cautious due to potential cognitive side effects, with the dose usually capped at 200 mg daily.
- Aripiprazole (Abilify): 15 mg/day; helps counteract weight gain and metabolic disturbances when used adjunctively.
- Meds usually managed by PCPs, but which some psychiatrists will feel comfortable starting:
 - Semaglutide (Ozempic): Initiate at 0.25 mg once weekly and can titrate based on response and tolerance. Highly effective for weight loss.
 - Atorvastatin (Lipitor) 10-80 mg daily or Simvastatin (Zocor) 5-40 mg at bedtime for dyslipidemia.
 - ACE inhibitors like lisinopril or Angiotensin II receptor blockers like losartan for hypertension.
- **Collaborate with outpatient providers.** Work with your social workers to ensure your patient has a follow-up appointment with a PCP. Make sure that you have highlighted concerning labs in your discharge summary, as this will often be the only hospital document that outpatient providers will read. If you have time, consider personally calling the PCP at the time of discharge to discuss your concerns.