

## **Monitoring Considerations for Second Generation Antipsychotics: A Review of Robert Young Center Metabolic Screening**

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### **Context**

Pharmacotherapy is the cornerstone of the treatment and management of psychotic disorders. In the past decade the use of second generation antipsychotics has largely replaced the use of conventional antipsychotic because they have a broader spectrum of efficacy for both positive and negative symptoms of psychosis, lower risk for extrapyramidal side effects and tardive dyskinesia, and more efficacy at treating cognitive and affective symptoms of psychotic illness. Although the introduction of the atypical antipsychotic medications in the past two decades has advanced the treatment of psychotic illness, their wide use in clinical practice has generated serious concerns for treatment-emergent adverse events such as weight gain, diabetes, and dyslipidemia (increased LDL cholesterol, and triglyceride level, and decreased HDL cholesterol). These adverse events are closely linked to type II diabetes and cardiovascular disease. Practice guidelines have been developed to monitor and manage these adverse events as the risks for these adverse events differ depending on the atypical antipsychotic used. However, little is data is available about routine screening and monitoring of at risks patients in clinical practice.

### **Objectives**

To conduct a health screening to identify participants with risk factors for metabolic syndrome such as obesity, hypertension, diabetes, and dyslipidemia, in a community mental health center by conducting a community wide cardiovascular screening.

### **Design, Setting, and Participants**

Cardiovascular health screening was conducted on two consecutive days in May 2005 at Robert Young Center Community Mental Health Center. Screening dates were advertised in the community by various means with instructions to intended participants to fast the night prior to screening. A total of 177 participants took part in the screenings. A data collection form developed prior to the screenings was used to collect the following data points: age gender, height, weight, LDL cholesterol, HDL cholesterol, triglyceride level, medication list (including antipsychotics), medical history of diabetes, cardiovascular disease, or hypertension, risk factors for diabetes and coronary heart disease, blood pressure, and fasting glucose levels.

### **Main Outcomes Measure**

Incidence of obesity, hypertension, dyslipidemia, and diabetes as defined by the Centers for Disease Control (CDC), National Cholesterol Education Program Adult Treatment Panel III (NCEP ATP III), Joint National Committee of prevention, detection, evaluation and treatment of high bloods pressure, and American Diabetes Association ( nNC7)(ADA) guidelines respectively.

### **Results**

Nine percent of the participants self-reported a history of diabetes (DM), 4% reported cardiovascular disease and 21% reported hypertension (HTN). Approximately 36% of patients reported taking an

antipsychotic medication while the rest reported taking a psychotropic medication. Over 75 % of the participants had a body mass Index (BMI) classification as overweight (35.9%) or obese (39.5%). Almost half the population screened was classified as pre-hypertension with 16.9% falling in Stage I HTN, 3.4% in stage II HTN. Thirty-two percent of patients had borderline high LDL (26%), high LDL (4.7%), or very high LDL (2%). Nearly 50% of the participants screened had high triglycerides (TG) greater than 150 mg/dl. . Forty-two percent of the population had low HDL (<40mg.dl). Provisional diagnosis of diabetes (glucose >126 mg/dl) was documented in 14.9% of participants.

**Conclusion**

A high burden of metabolic syndrome was found in the screened group. Given higher prevalence of metabolic syndrome at baseline in persons with psychiatric disorders and or taking psychotropics, physicians treating psychotic illnesses should routinely monitor at risks patients and adhere to practice guidelines that prevent metabolic complications for at-risk patients. Models of care to addressed this clinical challenge.