Metabolic Syndrome: A Preventable & Treatable Cluster of Conditions

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Purpose & Goals

• PURPOSE
  • To address the clinical aspect of reducing the prevalence of metabolic syndrome in the community served by Central Mississippi Health Services (CMHS) in Jackson, MS.

• GOALS
  • To identify clinic patients that meet diagnostic criteria over a four-week period
  • To educate identified patients on the subject of Metabolic Syndrome
  • To lay a groundwork for creating management plans for patients that suffer with Metabolic Syndrome.
Methodology

• Patients meeting 3 out of 5 conditions of Metabolic Syndrome were identified and included in the study.

• Gender, age, ethnicity, current diagnosis, and lab results associated with individual conditions were obtained from the clinic’s electronic medical records.

• In addition, waist circumference was taken from each patient identified with metabolic syndrome.

• Identified patients were surveyed and educated on the complications associated with the syndrome as well as appropriate lifestyle modifications.
Metabolic Syndrome Patient Survey

1. How often do you visit the doctor’s office? _________

2. How often do you exercise?
   - Cardiovascular (Walk, Run, Jog)? _______
   - Strength Resistance (Lift Weights)? _______

3. Do you smoke? Y / N  If Yes, How many packs/day? _______


5. Do you have a family history of ....?
   - Diabetes (Sugar)
   - Hypertension (High Blood Pressure)
   - Hyperlipidemia (High Cholesterol)
   - Obesity (Overweight)

6. Has your diet changed since you found out you had (Diabetes, HTN, High Cholesterol)? Y / N
   - What do you eat everyday? _____________________________

7. Do you know what metabolic syndrome is?
Results

Patients Over a 4-week Period

- 116 Did not Meet Diagnostic Criteria
- 39 Met Diagnostic Criteria

Gender

- 39 Identified Patients
  - 20 Female
  - 19 Male

Patients Identified with Conditions Associated with Metabolic Syndrome

- Hyperlipidemia (Tgs & HDL): 29
- Hypertension: 38
- Waist Circumference: 34
- Diabetes/Insulin Resistance: 27

Risk of Chronic Kidney Disease

- eGFR
  - <60: 8
  - 61-80: 5
  - >100: 14

Patient Lab Values

- Blood Sugar: 87-426 mg/dL
- HbA1C: 5.5-14.6%
- Waist Circumference: 37-55 inches
- BMI: 22.71 to 46.43
- Blood Pressure: Systolic: 102-182 mmHg, Diastolic: 62-110 mmHg
- Triglycerides: 48-638 mg/dL
- HDL: Female: 38-82 mg/dL, Males: 25-78 mg/dL
Survey Results

How Often do You Visit the Doctor's Office
- As Needed
- Every 3 months
- <3 months

Do You Smoke?
- Yes
- No

Do You Drink Alcohol?
- Yes
- No

How Often Do You Exercise?
- No Exercise
- Light Exercise
- Moderate Exercise
- Vigorous Exercise

Family History?
- Yes
- No

Has Your Diet Changed?

Do You Know What Metabolic Syndrome is?
NO
Discussion & Opportunities

The study revealed a notable amount of patients within CMHS meeting diagnostic criteria, emphasizing the need for the clinic to focus on developing tools to reduce and prevent conditions associated with Metabolic Syndrome.

- The American College of Preventive Medicine in, “Metabolic Syndrome Time Tool” has outlined a management plan that could be adjusted to the needs of CMHS and implemented as a standard in managing Metabolic Syndrome Patients.

- By the leadership implementing the outlined recommendations and developing the foundation for re-organizing the practice, CMHS stands a chance in effectively reducing the risks associated with Metabolic Syndrome in the patient population it serves.
• The American College of Preventive Medicine recommends reorganizing practice systems according to the Chronic Care Model and streamlining the office visit to facilitate management and behavior change including:
  • Self-management support
  • Developing care teams that include clinicians, nurses, dietitians, social workers, behavioral health professionals, health coaches, exercise therapists, and community health workers.
  • Development of clinical information systems to assist tracking care should also be considered.
  • Developing patient registries for specific conditions
  • Designating a team member to periodically review, update, identify needed services, and send out reminders to patients

• During the office visit Medical Assistants/Nurses should:
  • Measure & record waist circumference in addition to the standard vital signs and review of symptoms
  • Calculate a Framingham CVD Risk Score
  • Identify patients that meet 3 or more criteria for Metabolic Syndrome
  • Code as "Dysmetabolic Syndrome", ICD-9 code: 277.7

• Medical Providers should:
  • Review patient’s risk factors and order necessary lab tests to identify individual conditions associated with the Syndrome.
  • Explain the syndrome
  • Discuss the risks
  • Outline a plan to reverse the Syndrome
  • Assess willingness to try lifestyle approach
  • Prescribe pharmacotherapy if patient not willing to try lifestyle approach
  • Describe follow-up plan
Future Aims: Ensuring Generational Health

- Advocacy for reducing health disparities through education of the younger generation is key to a healthy future.

- As CMHS increases its young patient population, it should design programs that focus on healthy living and equipping children with transferable leadership skills that empower them to influence the health of their community.
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