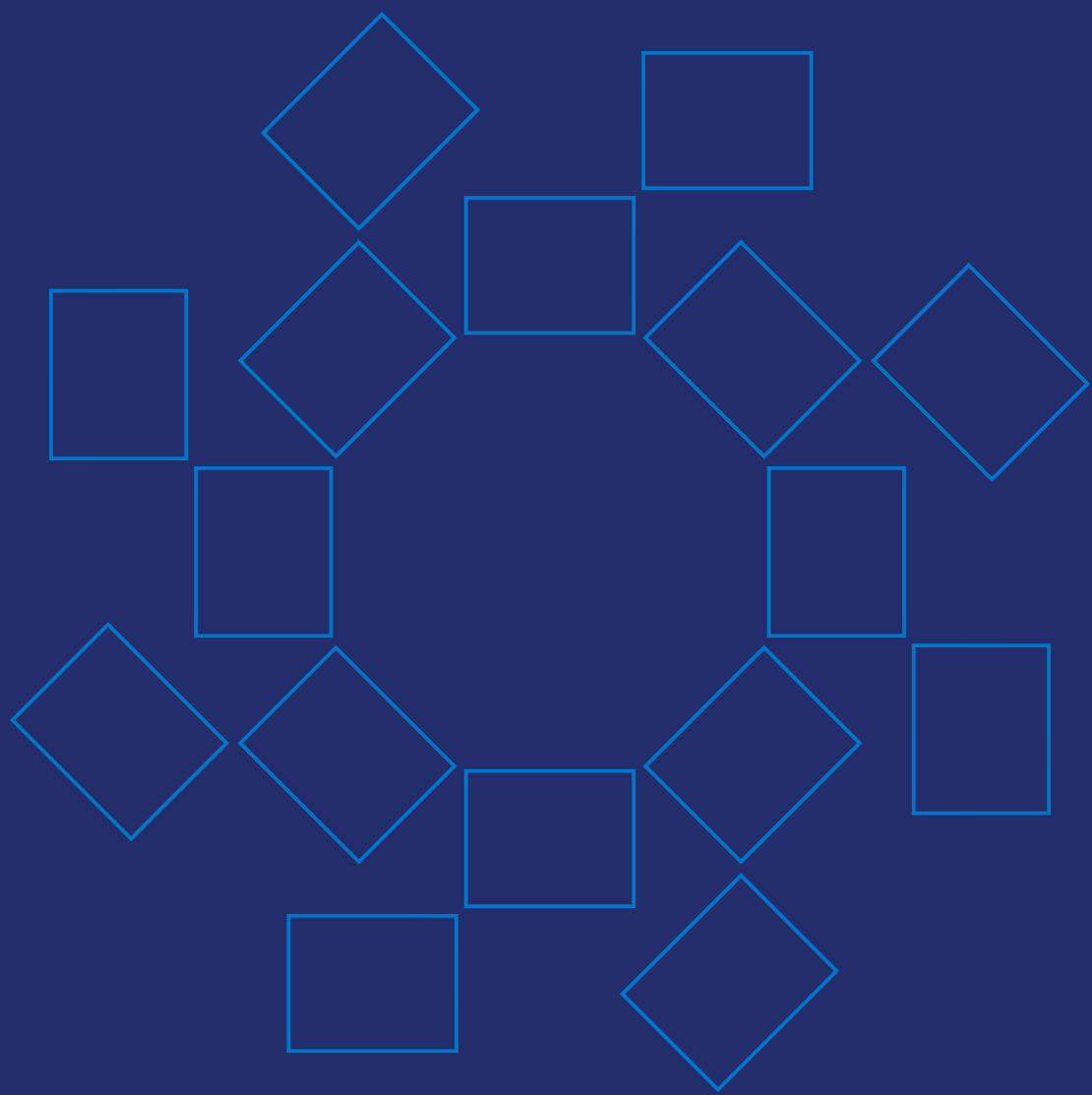


DIABETES UPDATE 3.0

Quality and Patient Safety Department ■ Hackensack Meridian Health, 2023



Hackensack
Meridian Health



DIABETES OVERVIEW

TOTAL DIABETES:

- 37.3 million people have diabetes (11.3% of US population)
- Diagnosed: 28.7 million diagnosed
- Undiagnosed: **8.5 million (23%)**

PREDIABETES

- Total: 96 million people over the age of 18 years have prediabetes (38% of adult US population)
- 65 or older: **26.4 million people over age 65 or older (48.8%) have prediabetes**

(cdc.gov/diabetes/data/statistic-report)

IDENTIFY DIABETES MELLITUS AND PREDIABETES

Screen all adults between ages of 35 and older who are overweight or obese (every 1-3 years)

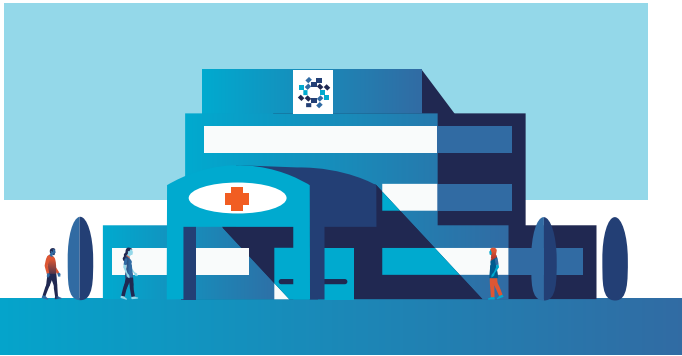
- Diabetes risk factors- family history, history of GDM, physical inactivity, HTN, depression, OSA, hyperlipidemia, medications such as steroids, atypical antipsychotics

SCREENING TESTS FOR PRE-DIABETES:

- Hemoglobin a1c 5.7% or above OR
- Fasting glucose greater than 100 and less than 125 mg/dl

SCREENING TESTS FOR DIABETES MELLITUS:

- Hemoglobin a1c 6.5% or above OR
- Fasting glucose greater than 126 mg/dl OR
- 2 hour plasma glucose
- ≥ 200 mg/dl during OGTT (oral glucose tolerance test) OR
- Random plasma glucose ≥ 200 mg/dl (with symptoms of polyuria, polydipsia, weight loss)



DIABETES MANAGEMENT

MANAGE PREDIABETES TO PREVENT PROGRESSION TO TYPE 2 DIABETES MELLITUS

- Lifestyle modifications (150 minutes of exercise per week)
- Weight loss (set goals), consider medications (orlistat), phentermine/topiramate, naltrexone/bupropion ER, liraglutide, semaglutide, bariatric surgery
- (Weight loss reduction of 7-10%)



MANAGE DIABETES TO TARGET HEMOGLOBIN A1C LEVELS (PREVENT TREATMENT INERTIA)

- Weight management (assess BMI - body mass index) and document in chart
 - Overweight (25-29.9 kg/m²)
 - Class 1 obesity (30-34.9 kg/m²)
 - Class 2 obesity (35-39.9 kg/m²)
 - Class 3 obesity (≥ 40 kg/m²)
- Lifestyle modifications (dietary changes, behavior changes, food labels, physical activity)
- Individualize treatment goals depending on age, life expectancy, duration of diabetes with complications, risk for hypoglycemia, and resources/support system.

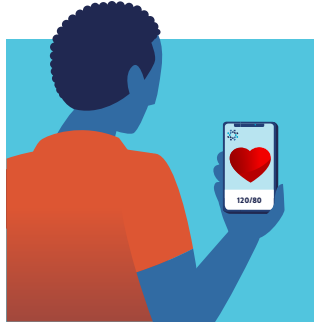
DIABETES & COMORBIDITIES

CARDIOVASCULAR DISEASE RISK REDUCTION

CV disease is leading cause of death in diabetic patients.

Ensure the following:

- Blood Pressure control
- Lipid therapies
- ASA (81mg) for patients with DM and history of atherosclerotic CVD
- Smoking cessation



SCREEN AND ADDRESS DIABETES ASSOCIATED COMORBIDITIES

- Depression is more prevalent in diabetics
- Cognitive impairment – the risk increases with hypoglycemia
- Cancer risk - there is increased incidence of liver, pancreatic, endometrial, colon, breast and bladder cancer
- Dental disease - periodontal disease and inflammation
- Liver disease - fatty liver, cirrhosis
- Sleep apnea is more prevalent and may worsen glucose levels
- Fracture risks - hip fractures are more frequent in DM
- Diabetic eye disease
- Diabetic foot disease
- Don't forget - influenza and pneumococcal vaccines

DIABETES TIPS & MANAGEMENT

MEDICATION TIPS:

- Consider starting SGLT2 inhibitor and GLP1 class of medications for patients with ASCVD
- Consider SGLT2 inhibitor in patients with heart failure and kidney disease
- Do not prescribe DPP4 inhibitors with a GLP1 medication. When starting a GLP1 medication, remember to stop the DPP4 inhibitor (DPP4 inhibitors will interfere with GLP1 effectiveness because they work in the same pathway)

ASSESS FOR HYPOGLYCEMIA AWARENESS:

- Assess patients for the ability to feel low sugars
- Don't forget to prescribe a glucagon pen or inhaled glucagon in patients on insulin and who are at risk of hypoglycemia
- Patients on insulin should self monitor glucose
- Employ an individualized patient therapy plan

BEFORE SURGERY OR NOT EATING:

- Remember to counsel patients to stop SGLT2 inhibitors when patients are going to be NPO, and ideally 3 - 4 days before surgery. Take the medication only if you are drinking fluids. Risk of dehydration.
- Stop oral medications on day of surgery (stop SGLT2 inhibitors 3-4 days before surgery).
- Stop metformin on the day before surgery or contrast dye and 48 hour after getting contrast or surgery.
- Reduce long acting insulin in half the day before surgery. Restart the full dose after surgery when the patient is able to eat.
- Do not give scheduled short acting insulin if the patient is not eating.



CONTINUOUS GLUCOSE MONITORING (CGM)

WHAT YOU NEED TO KNOW

PERSONAL CONTINUOUS GLUCOSE MONITORING (CGM)

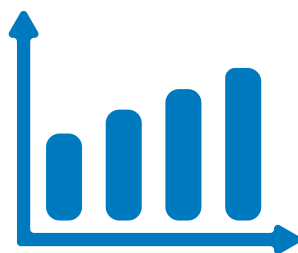
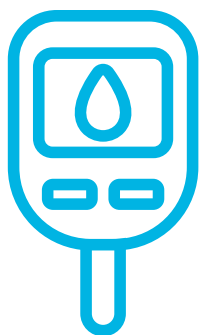
- Tool that can help improve diabetes management by increasing adherence to self monitoring, teaching tool to monitor control, and warning tool to identify when sugars are too high or too low,
- CGM uses interstitial fluid glucose levels to determine glycemic levels
- CGM is shown to help:
 - Decrease Hba1c,
 - Decrease glycemic variability,
 - Increase time in range,
 - Decrease hypoglycemia and
 - Reduce hypoglycemic events

COVERAGE CRITERIA FOR PATIENTS MEDICARE

- Diagnosis of type 1 or type 2 diabetes plus:
- Be treated with insulin multiple (3 times) times per day or insulin pump
- Require frequent adjustment of insulin treatment regimen, based on CGM results

COVERAGE CRITERIA FOR PATIENTS WITH COMMERCIAL PAYERS

- Diagnosis of Diabetes, plus:
- Taking multiple daily injections of insulin, or
- Insulin pump, or
- Frequent hypoglycemia. or
- Hypoglycemia unawareness, or
- High degree of glycemic variability, or
- Not achieving glucose targets



CGM DATA REVIEW

- Download data- key metrics, day to day variation, what person learned, how self management
- Assess safety- hypoglycemia events, % time in hypoglycemia, # of events
- Time in ranges - focus on positive, how to replicate what is working well
- Areas for improvement- hyperglycemia, time above range, % hyperglycemia, # events - interactive discussion on causes, solutions and adjustment of self management
- Action plans - developed collaboratively with person with diabetes

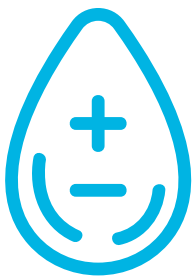
TROUBLESHOOTING TIPS:

- Educate proper sensor application and adhesion techniques
- CGM lags behind blood glucose
- If sensor has sugars <70, patient should confirm sugar reading with blood glucose monitoring.
- For several readings > 200mg/dL patients should contact their health care provider
- Interfering substances that affect accuracy include:
 - Ascorbic acid
 - Acetaminophen
 - Uric acid, Icodextrin (in peritoneal dialysis)
 - L-Dopa

ORDERING IN EPIC:

- Order the FreeStyle Libre 2 Reader only if the patient does not have a smartphone that is compatible with the app.
- Order FreeStyle Libre 2/3 sensor 6 sensor is 3 month supply (Include diagnosis code in order)

For FreeStyle Libre sensor troubleshooting: please contact the Abbott Customer Service Hotline at 855-632-8658



DEFEAT **DIABETES**

IMPORTANT REFERENCES:

Pharmacologic Approaches to Glycemic Treatment: Standards of Medical Care in Diabetes—2022. *Diabetes Care* 2022;45(Suppl. 1):S125–S143 | <https://doi.org/10.2337/dc22-S009>.

CONTACT US

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“

Defeating Diabetes, Improve Health Outcomes”.

— Suelyn Boucree, MD, MBA, FACP
Network Medical Director, Quality





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 **KEEP GETTING BETTER**