

The Sweet Accessibility of Continuous Glucose Monitors

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Walter P. Scheffe CPE Series
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Financial Disclosure and Resolution

Under guidelines established under the Standards for Integrity and Independence in Accredited Continuing Education, disclosure must be made regarding relevant financial relationships with ineligible companies within the last 24 months.

I have no relevant financial relationships with ineligible companies to disclose.

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Professional Practice Gap

- Medicare, Medicaid, and some commercial plans recently updated the criteria for continuous glucose monitoring (CGM) device coverage
 - Greatly increased CGM accessibility for type 2 diabetes (T2DM) patients
 - Still inertia with acquiring and utilizing CGMs
- Pharmacists, in collaboration with other providers, can be involved with:
 - Ordering CGMs
 - Educating patients on CGMs
 - Interpreting key metrics of CGMs

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Learning Objectives

At the completion of this activity, *pharmacists* will be able to:

1. Describe the recent expansion of continuous glucose monitoring (CGM) coverage
2. Recognize the benefits of CGM use compared to traditional glucose monitoring
3. State the differences of personal CGM devices on the market
4. Recall recommendations pertaining to the procurement, usage, and interpretation of CGMs

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When poll is active, respond at pollev.com/ou321
Text **OU321** to **37607** once to join

Which of the following is TRUE regarding the required criteria for coverage of continuous glucose monitoring devices for Medicare patients?

Patients must be on multiple daily doses of insulin.

Patients can be on any amount and/or frequency of insulin.

Patients must have recurrent, documented grade 1 lows (< 70).

Patients can have a pre-diabetes diagnosis.

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Which of the following is TRUE regarding the different continuous glucose monitoring devices on the market?

FreeStyle Libre 3 reader is not yet available in retail pharmacies.

Dexcom G7 should be applied to the abdomen in patients 7 years and older.

FreeStyle Libre 2 must be scanned at least once daily to avoid gaps in data.

Dexcom G6 receiver must be within 50 feet of the sensor for data to display.

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Which of the following is TRUE regarding key metrics when interpreting continuous glucose monitoring data?

Time in range (70-180) is recommended to be > 50% for all diabetes patients.

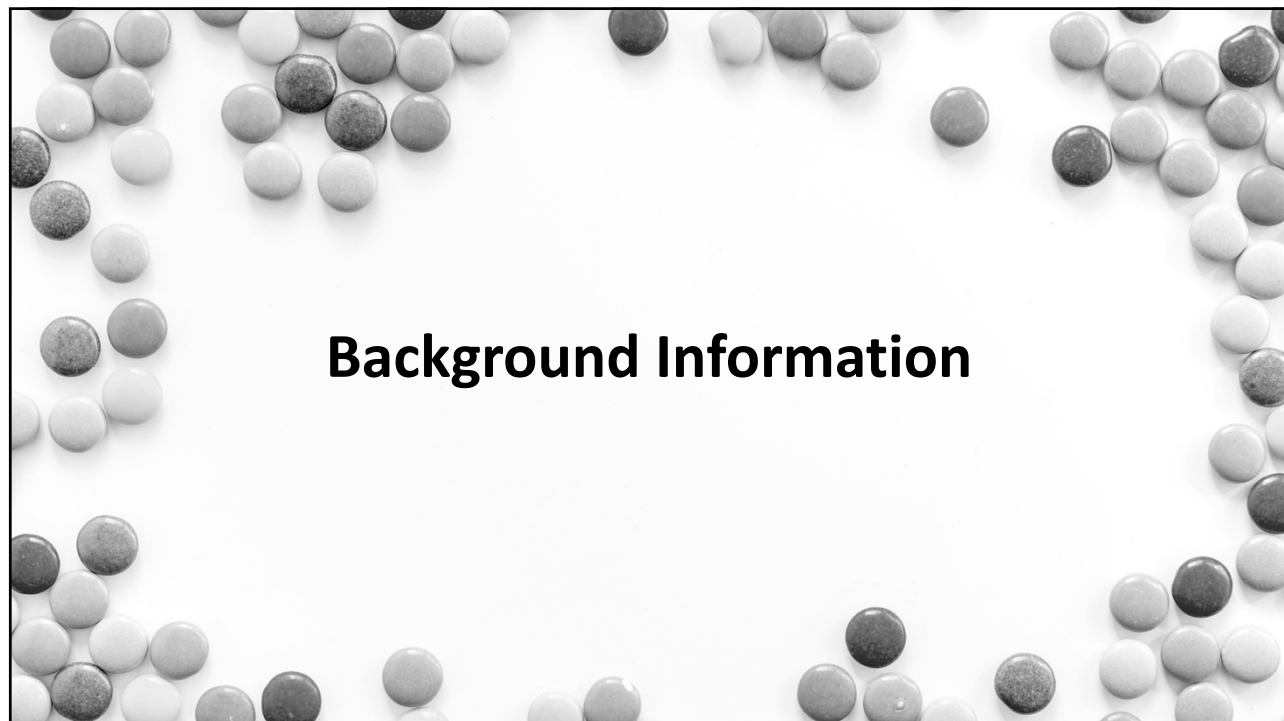
Time below range (< 70) is recommended to be < 5% for older/frail patients.

Glucose management indicator (GMI) is a measurement of glycemic variability.

Percentage of time the CGM is active should be at least 70% to interpret data.

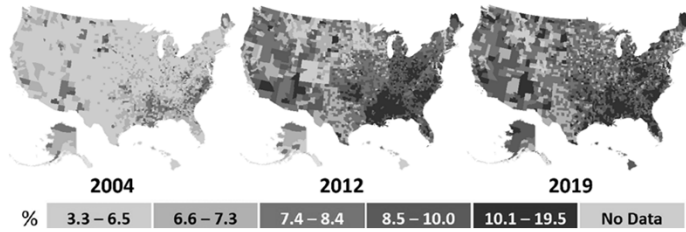
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Diabetes Prevalence



- Among the U.S., 37 million (11%) have diabetes
 - 28.7 million diagnosed, 8.5 million undiagnosed
 - Type 2 diabetes = 90-95% of cases
- Among Oklahoma, 400,000 (13%) have diabetes

References/Works cited: CDC. National Diabetes Statistics Report. 2022.

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Characteristic	Population Estimates, 2019 ^a Number in thousands (95% CI)	Incidence Estimates, 2018–2019 Rate per 1,000 (95% CI)
Total	1,398 (1,234–1,562)	5.9 (5.0–6.9) ^b
Age in years		
18–44	401 (309–493)	3.2 (2.3–4.4) ^b
45–64	703 (583–823)	10.1 (8.1–12.5) ^b
≥65	293 (230–356)	5.8 (4.3–7.8) ^b

References/Works cited: CDC. By the Numbers: Diabetes in America. 2022.

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Characteristic	Total Percentage (95% CI)	Men Percentage (95% CI)	Women Percentage (95% CI)
Race-ethnicity			
American Indian/Alaska Native	14.5 (14.5–14.6)	14.4 (14.3–14.5)	14.7 (14.6–14.8)
Asian, non-Hispanic, overall	9.5 (8.2–10.9)	10.4 (8.6–12.4)	8.6 (6.9–10.8)
Black, non-Hispanic	12.1 (11.3–13.0)	12.2 (11.0–13.5)	12.1 (10.9–13.3)
Hispanic, overall	11.8 (10.8–12.8)	11.6 (10.4–13.0)	12.0 (10.8–13.2)
White, non-Hispanic	7.4 (7.1–7.7)	8.0 (7.6–8.5)	6.9 (6.5–7.3)

References/Works cited: CDC. By the Numbers: Diabetes in America. 2022.

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Characteristic	Total Percentage (95% CI)	Men Percentage (95% CI)	Women Percentage (95% CI)
Education			
Less than high school	13.4 (12.5–14.4)	12.2 (10.9–13.6)	14.8 (13.5–16.2)
High school	9.2 (8.7–9.6)	10.2 (9.5–11.0)	8.3 (7.8–8.9)
More than high school	7.1 (6.8–7.5)	7.6 (7.1–8.1)	6.7 (6.3–7.2)
Family income to poverty ratio			
Less than 100% FPL	14.1 (13.1–15.2)	13.7 (12.0–15.5)	14.4 (13.2–15.7)
100–299% FPL	10.8 (10.3–11.4)	11.1 (10.4–11.9)	10.6 (9.9–11.4)
300–499% FPL	7.8 (7.3–8.3)	9.1 (8.4–9.9)	6.6 (6.0–7.2)
500% FPL or more	5.6 (5.2–6.1)	6.4 (5.8–7.1)	4.8 (4.3–5.3)

References/Works cited: CDC. By the Numbers: Diabetes in America. 2022.

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Review: Glycemic Monitoring

- **Hemoglobin A1c**
 - Average blood glucose over last 3 months
 - Used by clinicians and in clinical trials
 - Check every 3-6 months (depending on control)
- Blood glucose monitoring
 - Snapshot of blood glucose
 - Used by patients and clinicians
 - Frequency of checks depends on drug therapy
- Continuous glucose monitoring (CGM) – increasingly important role!

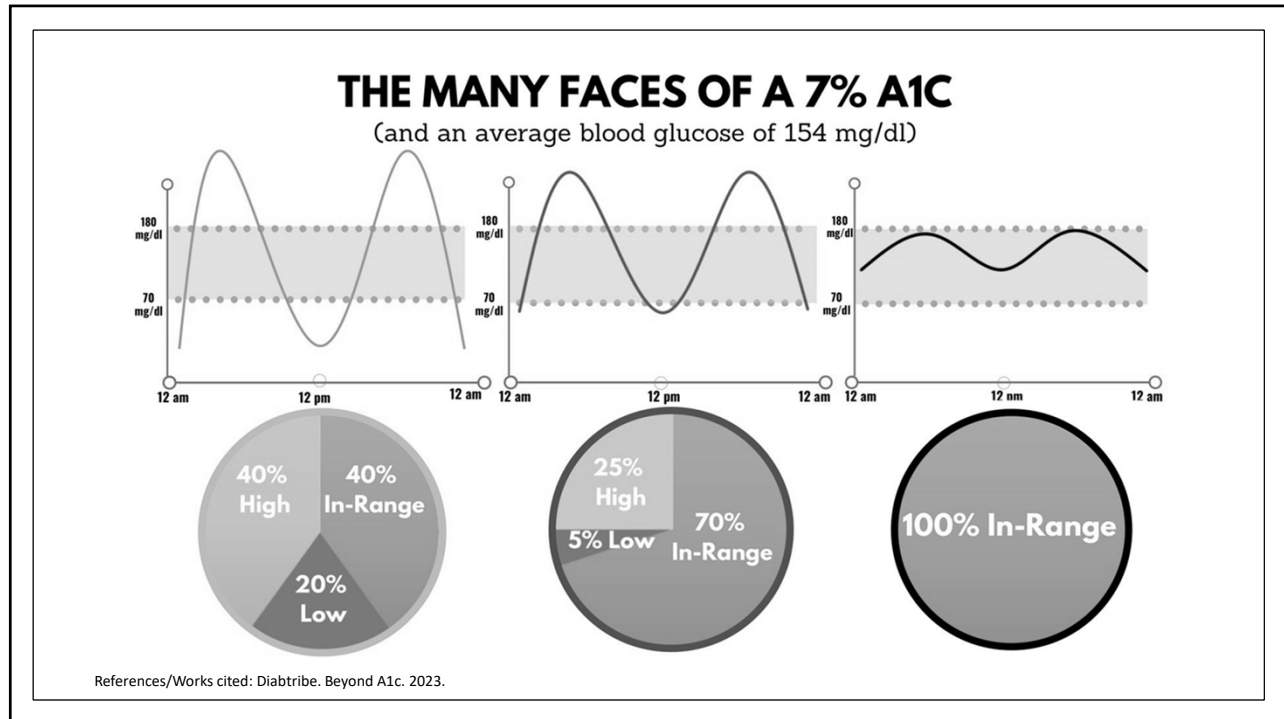
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HbA1c Limitations

- Indirect measurement, affected by conditions and medications...
 - Most anemias (deficiencies in iron, folate, or B12), asplenia, uremia (typically due to kidney failure), chronic alcohol use, chronic opioid use → FALSELY ELEVATED A1c
 - Hemolytic anemia, anemia of chronic disease, blood transfusions, splenomegaly, liver cirrhosis, pregnancy, certain HIV medications → FALSELY LOW A1c
 - Less common Hb variants and vitamin C use → VARIABLE EFFECTS on A1c
- Race/ethnicity may also impact A1c – more research needed
- No indication of variability in blood glucose throughout the day

References/Works cited: Radin MS. *J Gen Intern Med.* 2014 Feb; 29(2): 388–394.

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FSBG Limitations

- Several supplies needed
 - Requiring patient education and added costs
 - Burden for patient to carry supplies
- Relies on patient to remember to check
 - Non-insulin/basal insulin only – prefer at least 3-4x/week to once daily (fasting BG)
 - Basal + bolus insulin therapy – prefer closer to 4x/day (pre-meal BGs, bedtime BG)
- Accuracy
 - Needs to be timed with meals – either before a meal or 2 hours after a meal
 - Test strips should be stored correctly and not expired
- Difficulty with use
 - Good dexterity required
 - Complaints of pain

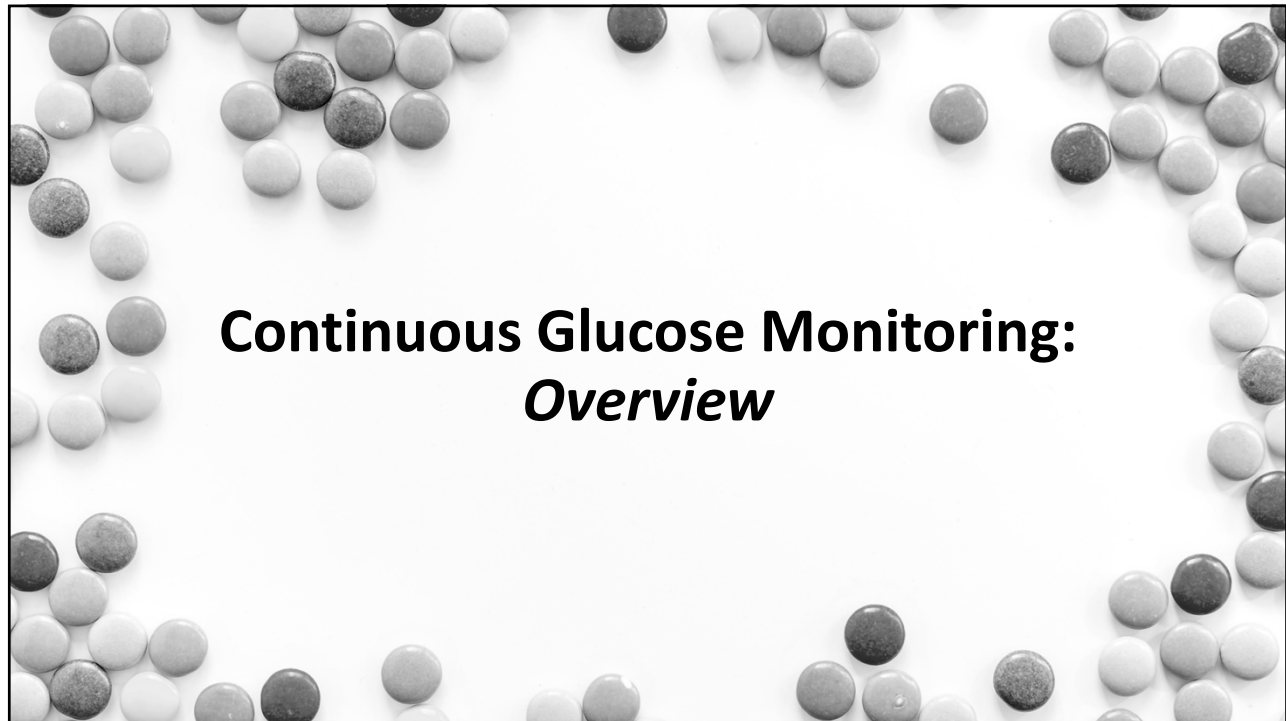
FSBG: Finger-Stick Blood Glucose

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- **Continuous glucose monitoring (CGM)** – increasingly important role!

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Continuous Glucose Monitoring

- A device continuously measuring glucose (every 1-5 minutes) in the interstitial fluid to display the current glucose + projected trends
 - Correlates to blood glucose
 - Although with lag time
 - Some alert hypo-and hyper-glycemia
 - Various reports created to assess
 - Applied and worn for 10-14 days
 - Includes 3 components: sensor + transmitter
 - + receiver/reader (can be a smartphone) nearby



References/Works cited: Abbott. How Does the Sensor Work?

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Types of CGMs

Professional: owned by the clinic for short-term use, insurance coverage for most all diabetes patients

Personal: owned by the patient for long-term use, insurance coverage standards have recently changed



Intermittently scanned CGM (isCGM): only displays values when scanned (must scan at least every 8 hours)

FreeStyle Libre 14-day

FreeStyle Libre 2 - *can be integrated with other digital devices*



Real-time CGM (rtCGM): displays values continuously

Dexcom G6, Dexcom G7 - *can be integrated with other digital devices*

FreeStyle Libre 3 - *can be integrated with other digital devices*

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Types of CGMs

Adjunctive

- Requires fingerstick verification for treatment decisions
- Medtronic Guardian (rtCGM)

Non-adjunctive

- Does NOT require fingerstick verification for treatment decisions
- Dexcom G6 (rtCGM)
- Dexcom G7 (rtCGM)
- FreeStyle Libre 14-day (isCGM)
- FreeStyle Libre 2 (isCGM)
- FreeStyle Libre 3 (rtCGM)
- Eversence (implantable CGM)



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For all CGMs...

If your symptoms do not seem to match the CGM reading...
→ Check with your finger stick meter!

... Recognize all CGMs have lag-time, but should be within a certain range

→ Rule of 20

- Values +/-20%
- If having a low... values +/-20 points

Hypoglycemia Symptoms



References/Works cited: Dexcom. Is my Dexcom sensor accurate? 2023.

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Continuous Glucose Monitoring: *Change in Accessibility*

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Evidence Expanding to Type 2 Diabetes

Adults with Type 2 Diabetes				
Study	Patients	CGM	A1c Outcomes	Other Outcomes
Beck et al. 2017	158 pts on MDI	Dexcom	A1c adj. mean difference of -0.3% ($p=0.002$)	No change in hypoglycemia
Ehrhardt et al. 2015	100 pts <i>not</i> on prandial insulin (50% oral tx only)	Dexcom	A1c difference of -0.6% ($p=0.002$)	Not applicable
Haak et al. 2017	224 pts on MDI or insulin pump	Libre	Only difference in A1c if age < 65 years ($p=0.03$)	Time < 70 reduced by 43% ($p=0.0006$)
Martens et al. 2017	175 pts on basal insulin only	Dexcom	A1c adj. mean difference of -0.4% ($p=0.02$)	Adj. mean difference: <ul style="list-style-type: none"> Time < 70 -0.1% ($p=0.001$) Time < 54 -0.24% ($p=0.02$)
Yoo et al. 2017	65 pts on oral agents or insulin	Guardian	A1c improved greater by 0.5% ($p=0.004$)	No significant changes in hypoglycemia

MDI: Multiple Daily Injections

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General ADA Guideline Points

- Acceptable outcome measurement for clinical trials moving forward
- CGMs are meeting patient needs
 - Data can serve as an A1c surrogate
 - Useful for evaluating/creating more personalized treatment plans
 - While only FDA approved for outpatient use, patients should be allowed to use CGMs inpatient if have all supplies and are well enough

The ADA guidelines have discussed CGMs for years...
so why the significant increase in accessibility?

References/Works cited: ADA. *Diabetes Care*. 2023;46:S111-127.

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Accessibility Changes

- COVID-19 pandemic
 - Significant ramifications of poorly managed diabetes – as many as 40% of Americans who died of COVID-19 had diabetes
 - Effects of the pandemic even more pronounced in underserved areas – those of lower income and of color were twice as likely to die
 - CGM use and coverage expanded due to need for remote monitoring to minimize contact/use of PPE – access to health insurance being a strong predictor of CGM use

References/Works cited: ADA. Health Equity and Diabetes Technology.

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ADA 2021 Study Results

Those most affected by diabetes were the least like to use CGMs

Children younger than 18 use CGMs significantly more than those 45-64 of age

Black Americans are at the most pronounced disadvantage for CGM use

Individuals with Medicaid are the least likely with CGM access

References/Works cited: ADA. Health Equity and Diabetes Technology.

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Medicare & Oklahoma Medicaid

- Criteria for CGM coverage:
 - Diabetes mellitus diagnosis
 - Insulin-treated
 - OR
 - Problematic hypoglycemia, *must be ≤ 20 years for Medicaid*
 - Recurrent/documentated lows < 54
 - Any history of a low < 54 → altered state requiring third party assistance
 - Patient is sufficiently trained and has follow-up at least every 6 months

References/Works cited: CMS. Glucose Monitors. 2023.

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Commercial Plans

- Coverage varies from plan to plan, but several have expanded coverage...
 - *Dexcom exclusive coverage, regardless of diagnosis*
 - CVS Caremark
 - HealthChoice
 - Aetna
 - *Dexcom referred coverage, need a diagnosis and similar to CMS criteria*
 - Express Scripts
 - Cigna
 - BlueCross BlueShield
 - OptumRx
 - United Healthcare
 - Elevance Health (Anthem)

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Out-of-Pocket Pricing

- FreeStyle Libre is most affordable if paying out-of-pocket
- Sensors should never be more than \$75/month

Patients can fill their Rx at a participating pharmacy[†] with their choice of either a FreeStyle Libre 2 or FreeStyle Libre 3 system — a more affordable CGM^{§1}

If patients are asked to pay >\$75 for two sensors or have questions about coverage and costs, please have patients call 844-330-5535

References/Works cited: Abbott. Prescribing Instructions: FreeStyle Libre Systems. 2023.

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Continuous Glucose Monitoring: *Review of Available Products**

References/Works cited:
Dexcom G7 CGM - Powerfully simple diabetes management | Dexcom.
Continuous Glucose Monitoring (CGM) | FreeStyle Libre (CGM) systems.

*not all-inclusive

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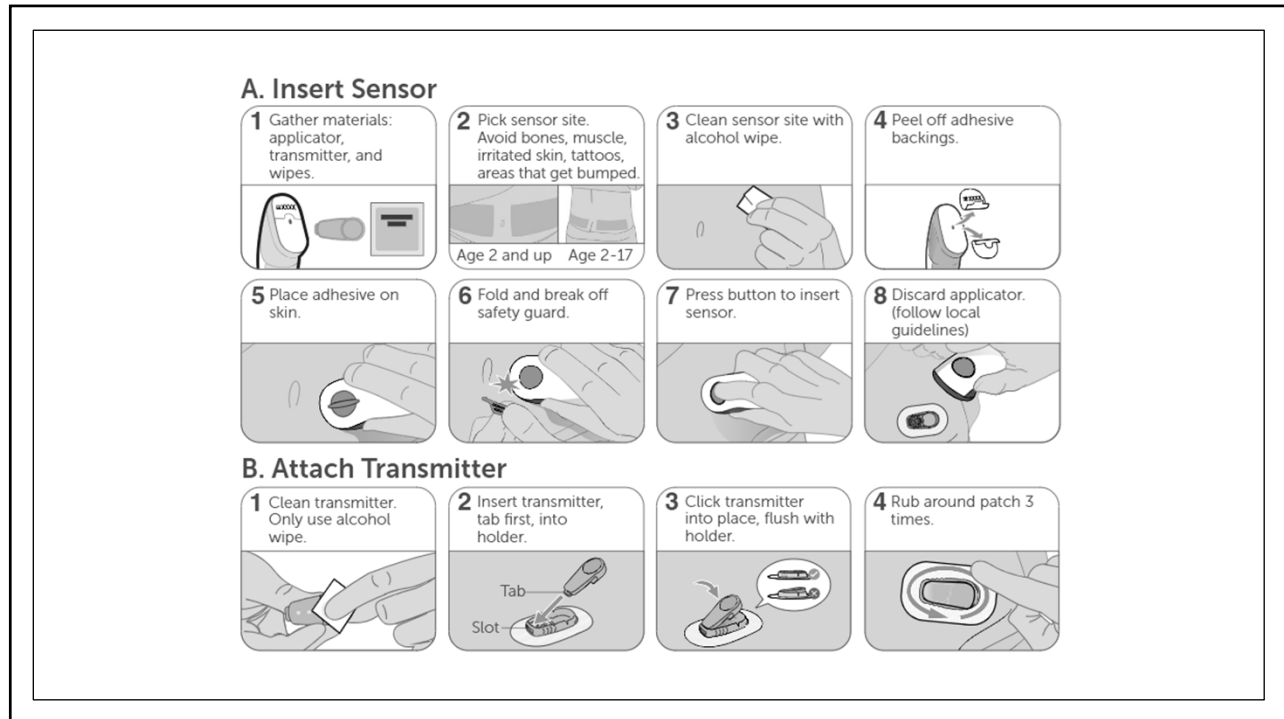
	Dexcom G6	Dexcom G7	FreeStyle Libre 2	FreeStyle Libre 3
Type	rtCGM		isCGM	rtCGM
FDA approval	≥ 2 yrs	≥ 2 yrs, pregnancy	≥ 4 yrs, pregnancy	
Application site	Abdomen, upper buttocks (2-17 yrs)	Upper arm (7+ yrs), upper buttocks (2-6 yrs)	Upper arm	
Wear-time	10 days	10.5 days	14 days (soon to be 15 days)	
Transmitter	Reusable, 90 days	All-in-on, disposable	All-in-on, disposable	
Warm-up time	2 hours	30 minutes	1 hour	
Alerts	Real-time	Real-time, more customizable	Real-time	Real-time, more customizable
Water depth	8 feet, up to 24 hours		3 feet, up to 30 minutes	
Calibration	Not needed, optional			
Interactions	Hydroxyurea		Vitamin C	
Integration	Yes, multiple options	Not yet	Yes, multiple options	Not yet
MARD	9.0%	8.2%	9.2%	7.9%

MARD: Mean Absolute Relative Difference

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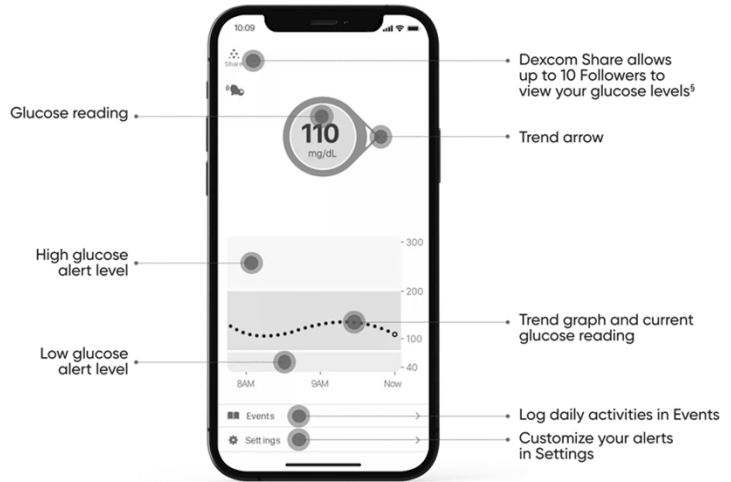
Dexcom G6

- Senses/displays values every 5 minutes
- Pairs with a smart phone via Bluetooth and/or a touchscreen receiver
 - Must be within 20 feet of sensor
 - Compatible smart phones: [Dexcom Products & G6 Compatibility with Smartphone Devices | Dexcom](#)
 - Smart phone use requires applications
 - **Dexcom G6** – must always be running in the background and Bluetooth on
 - **Clarity** – required to share data with healthcare providers
 - Dexcom Follow – can share with up to 10 followers
 - Also compatible with Glooko, Tidepool, Livongo, and Apple watch
 - Receiver use requires USB plug-in to review data fully

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Dexcom G6

- Log “events” (optional)
 - Insulin doses
 - Food
 - Finger-stick values
- Customize alerts
 - Sounds
 - Value thresholds



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	Dexcom G6	Dexcom G7	Freestyle Libre 2	Freestyle Libre 3
Type	rtCGM		isCGM	rtCGM
FDA approval	≥ 2 yrs	≥ 2 yrs, pregnancy	≥ 4 yrs, pregnancy	
Application site	Abdomen, upper buttocks (2-17 yrs)	Upper arm (7+ yrs), upper buttocks (2-6 yrs)	Upper arm	
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Transmitter	Reusable, 90 days	All-in-on, disposable	All-in-on, disposable	
Warm-up time	2 hours	30 minutes	1 hour	
Alerts	Real-time	Real-time, more customizable	Real-time	Real-time, more customizable
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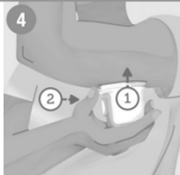








MARD: Mean Absolute Relative Difference

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INSERTING SENSOR

<p>1. Choose sensor site by age</p> <p>IMPORTANT! If you wore G6 sensors on your abdomen, wear G7 sensors on the back of your upper arm. Children ages 2-6 years can also use their upper buttocks.</p> <p>a. Age 7 years and older: Use back of upper arm</p> <p>b. Age 2 years (24 months) – 6 years: Use back of upper arm or upper buttocks</p> <p>Avoid areas:</p> <ul style="list-style-type: none"> • With loose skin or without enough fat to avoid muscles and bones • That get bumped, pushed, or you lie on while sleeping • Within 3 inches of infusion or injection site • Near waistband or with irritations, scarring, tattoos, or lots of hair <p>To keep sensor attached see dexcom.com/faqs</p> <p>2. Clean and dry site so sensor stays on</p> <ol style="list-style-type: none"> a. Wash hands with soap and water. Dry. b. Rub site with an alcohol wipe to get rid of all oils. c. Let dry completely so sensor will stick. <p>3. Unscrew cap</p> <ul style="list-style-type: none"> • Don't touch inside applicator • Don't use if damaged or previously opened 	<p>1a</p>  <p>1b</p>  <p>2a</p>  <p>2b</p>  <p>3</p> 	<p>4. Use applicator to insert sensor</p> <ol style="list-style-type: none"> a. Relax any muscles near site. b. Press and hold applicator firmly against skin until clear safety guard is pushed in. Then push button on side of applicator. <p>5. Remove applicator</p> <ol style="list-style-type: none"> a. Save applicator because you'll need its pairing code b. Screw cap back on applicator <p>6. Rub and press</p> <p>To help keep the patch on your skin:</p> <ol style="list-style-type: none"> a. Rub firmly around patch 3 times b. Gently press on top of sensor for 10 seconds <p>7. Apply overpatch</p> <p>You must apply the overpatch to keep the sensor on your body. It's bundled with the instructions in the sensor box.</p> <ol style="list-style-type: none"> a. Carefully pull off both clear liners, one at a time. Don't touch white adhesive area. b. Use colored tab to place overpatch around sensor. c. Rub around overpatch. d. Use tab to peel off colored liner. e. Rub around overpatch. f. Go back to the app or receiver to finish setup. 	<p>4</p>  <p>5</p>  <p>6a</p>  <p>6b</p>  <p>7a</p>  <p>7b</p>  <p>7c</p>  <p>7d</p>  <p>7e</p> 
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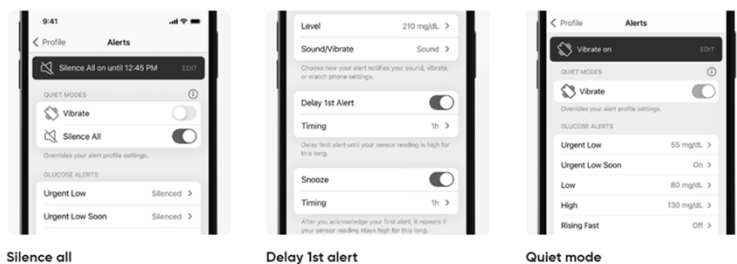
Dexcom G7

- Senses/displays values every 5 minutes
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 - Compatible smart phones: [Dexcom Products & G6 Compatibility with Smartphone Devices | Dexcom](#)
- Smart phone use requires applications
 - Simplified **Dexcom G7** app that has **Clarity** integration – however, still requires separate Clarity app to share data with healthcare providers
 - Dexcom Follow – can share with up to 10 followers
 - Also compatible with Glooko, Tidepool, Livongo, and Apple watch
- Receiver use requires USB plug-in to review data fully

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Dexcom G7

- Log “events” (optional)
 - Insulin doses
 - Food
 - Finger-stick values
- Customize alerts + functions for enhanced discretion



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	Dexcom G6	Dexcom G7	FreeStyle Libre 2	FreeStyle Libre 3
Type	rtCGM		isCGM	rtCGM
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Application site	Abdomen, upper buttocks (2-17 yrs)	Upper arm (7+ yrs), upper buttocks (2-6 yrs)	Upper arm	
Wear-time	10 days	10.5 days	14 days (soon to be 15 days)	
Transmitter	Reusable, 90 days	All-in-on, disposable	All-in-on, disposable	
Warm-up time	2 hours	30 minutes	1 hour	
Alerts	Real-time	Real-time, more customizable	Real-time	Real-time, more customizable
Water depth	8 feet, up to 24 hours		3 feet, up to 30 minutes	
Calibration	Not needed, optional			
Interactions	Hydroxyurea		Vitamin C	
Integration	Yes, multiple options	Not yet	Yes, multiple options	Not yet
MARD	9.0%	8.2%	9.2%	7.9%


MARD: Mean Absolute Relative Difference

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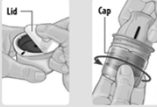
1.



Select site on **back of upper arm**. Do not use other sites as these may result in inaccurate glucose readings. **Note:** Avoid scars, moles, stretch marks, lumps, and insulin injection sites. To prevent skin irritation, rotate sites between applications.




Wash site using a plain soap, dry, and then clean with alcohol wipe. Allow site to air dry before proceeding.




Peel lid completely off Sensor Pack. Unscrew cap from Sensor Applicator.

CAUTION: Sensor codes must match on Sensor Pack and Sensor Applicator or glucose readings will be incorrect.


2.



Line up dark mark on Sensor Applicator with dark mark on Sensor Pack. On a hard surface, press down firmly on Sensor Applicator until it comes to a stop.




Lift Sensor Applicator out of Sensor Pack.



Sensor Applicator is ready to apply Sensor.


CAUTION: Sensor Applicator now contains a needle. Do not touch inside Sensor Applicator or put it back into Sensor Pack.

3.




Place Sensor Applicator over site and push down firmly to apply Sensor.

CAUTION: Do not push down on Sensor Applicator until placed over prepared site to prevent unintended results or injury.



Gently pull Sensor Applicator away from your body.



Make sure Sensor is secure. Discard used Sensor Applicator and Sensor Pack according to local regulations.

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FreeStyle Libre 2

- Senses values every 1 minute, but only displays when scanned* and *must* be scanned at least every 8 hours to record data
- Pairs with a smart phone via Bluetooth and/or a touchscreen reader
 - Must be within 20 feet of sensor
 - Compatible smart phones: [ART41556-102 rev-B-index \(freestyleserver.com\)](https://www.freestyleserver.com)
 - Smart phone use requires applications
 - **Libre 2** – must always be running in the background and Bluetooth on
 - LibreLinkUp – can share with up to 20 followers
 - Reader use requires USB plug-in to review data fully

*hold smartphone or reader within 1.5 inches from sensor

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FreeStyle Libre 2

- Add “notes” (optional)
 - Insulin doses
 - Food
 - Finger-stick values
- Customize alerts + functions for enhanced discretion; however, value will *not* display until scanned
 - Sounds
 - Value thresholds



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STEP 1

Select site on **back of upper arm**. Do not use other sites as these are not approved and may result in inaccurate glucose readings.
Note: Avoid scars, moles, stretch marks, lumps, and insulin injection sites. To prevent skin irritation, rotate sites between applications.

STEP 2

Wash site using a plain soap, dry, and then clean with alcohol wipe. Allow site to air dry before proceeding.

STEP 3

Unscrew cap from Sensor Applicator.
CAUTION:

- Do NOT use if damaged or if tamper label indicates Sensor Applicator has already been opened.
- Do NOT put cap back on as it may damage the Sensor.
- Do NOT touch inside Sensor Applicator as it contains a needle.

STEP 4

Place Sensor Applicator over site and push down firmly to apply Sensor.
CAUTION: Do not push down on Sensor Applicator until placed over prepared site to prevent unintended results or injury.

STEP 5

Gently pull Sensor Applicator away from your body.

STEP 6

Make sure Sensor is secure. Put the cap back on the Sensor Applicator. Discard used Sensor Applicator according to local regulations.

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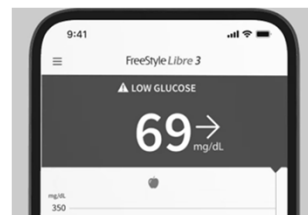
FreeStyle Libre 3

- Senses/displays values every 1 minute (*only* requires scanning when pairing)
- Pairs with a smart phone via Bluetooth and/or a touchscreen reader (currently only available with DME companies and not yet retail pharmacies)
 - Must be within 33 feet of sensor
 - Compatible smart phones: https://freestyleserver.com/Payloads/IFU/2023/q1/ART44628-004_rev-H-web.pdf
 - Smart phone use requires applications
 - **Libre 3** – must always be running in the background and Bluetooth on
 - LibreLinkUp – can share with up to 20 followers
 - Also compatible with Apple watch
 - Reader use requires USB plug-in to review data fully

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FreeStyle Libre 3

- Add “notes” (optional)
 - Insulin doses
 - Food
 - Finger-stick values
- Customize alerts + functions for enhanced discretion; values display always (no scanning needed)
 - Sounds
 - Value thresholds



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Tips & Tricks for CGMs

Products for Extra Stickiness

	Overbandage	A medical grade adhesive; bandage or tape!
	Tegaderm I.V. (overbandage)	A transparent film that provides adhesive strength
	Torbot skin tac	A hypoallergenic and latex-free "tacky" skin barrier
	Skin-prep protective barrier wipes	Protective liquid dressing that allows skin to breathe so tapes and films adhere better
	Mastisol liquid adhesive	Clear, non-irritating, non-water-soluble liquid adhesive that secures dressings even in moist areas

Products for Irritated Skin

Barrier Films*

Product	Advantages	Professional tips
Smith and Nephew IV Prep	- Waterproof, breathable barrier film - Also contains alcohol for antiseptic properties	- Comes in wipes - Let dry completely on skin - Not marketed as having tackifying properties, but may see mild enhancement to adhesion*
Bard® Protective Barrier Film	- Waterproof, breathable barrier film	- Comes in wipes or spray - Does not include antiseptic
SurePrep™ (Medline)	- Vapor permeable barrier film - Includes antiseptic	- Comes in wipes - Can be used on damaged skin as protection
Smith and Nephew Skin prep/no-sting skin prep	- Waterproof, breathable barrier film - Popular choice due to moderate protection and moderate adhesive properties combined*	- Comes in wipes or spray - Skin prep indicated for intact skin, no-sting skin prep indicated for intact or damaged skin - Does not include antiseptic
Cavilon™ No Sting Barrier (3M™)	- Waterproof, breathable barrier film	- Comes in wipes or spray - Does not include antiseptic

Over the Counter Steroid Spray†

Product	Advantages	Professional tips
Fluticasone propionate nasal spray (generic). Common examples: - Flonase® Allergy Relief - Flonase® Children's Allergy Relief - Clarispray® Nasal Allergy Spray	- May prevent mild, moderate, and severe skin reactions due to CGM adhesive	- Apply 2 puffs to sensor site. Wait 2 minutes for spray to dry. Insert sensor as usual.

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Customer Support & Application Videos

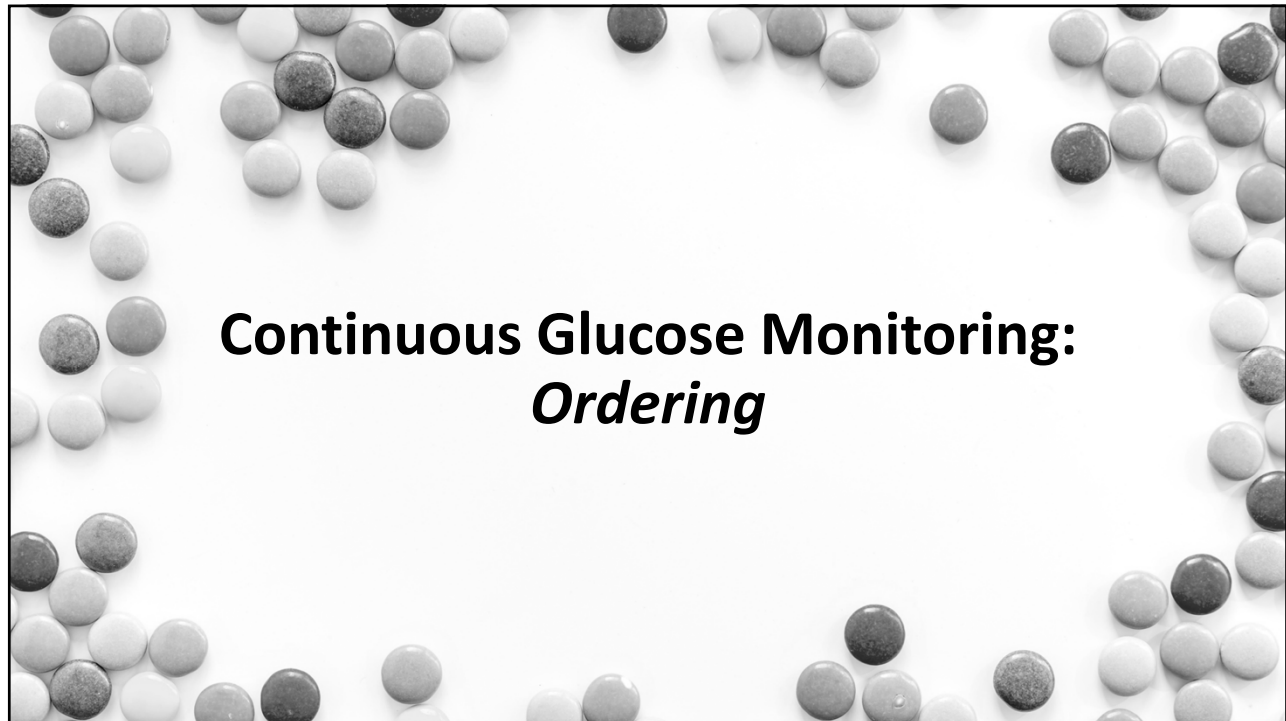
Dexcom

- Customer Support: [Contact Dexcom Customer Service for CGM Assistance | Dexcom](#)
- Dexcom G6 Application: [Dexcom G6: How to Insert the Sensor & Attach the Transmitter | Dexcom Provider](#)
- Dexcom G7 Application: [How to Insert the Dexcom G7 Sensor \[VIDEO\] | Dexcom Provider](#)

FreeStyle Libre

- Customer Support: [Contact Us | Customer Care & Sensor Support | FreeStyle Libre \(CGM\) systems](#)
- FreeStyle Libre 2 Video: [How to Apply the FreeStyle Libre 2 Sensor - YouTube](#)
- FreeStyle Libre 3 Video: [How to Set Up Your CGM System | FreeStyle Libre \(CGM\) systems](#)

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Ordering CGMs

CGM	Components	Quantity (3-month supply)	Refills
Dexcom G6	Dexcom G6 Sensor	9	3
	Dexcom G6 Transmitter	1	3
	Dexcom G6 Receiver	1, optional	0
Dexcom G7	Dexcom G7 Sensor/Transmitter	9	3
	Dexcom G7 Receiver	1, optional	0
FreeStyle Libre 2	Libre 2 Sensor	6	3
	Libre 2 Reader	1, optional	0
FreeStyle Libre 3	Libre 3 Sensor	6	3
	Libre Reader*	1, optional	0

*only currently available with DME suppliers

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Ordering CGMs

- When should orders be sent to the pharmacy...
 - Medicaid
 - No prior authorization is required if insulin has been filled within the last 90 days
 - If not, the following prior authorization will be needed



OKLAHOMA
Health Care Authority

State of Oklahoma
SoonerCare

Continuous Glucose Monitor (CGM) Prior Authorization Form

- Commercial plans
- Paying out-of-pocket
- Some Medicare Advantage plans...

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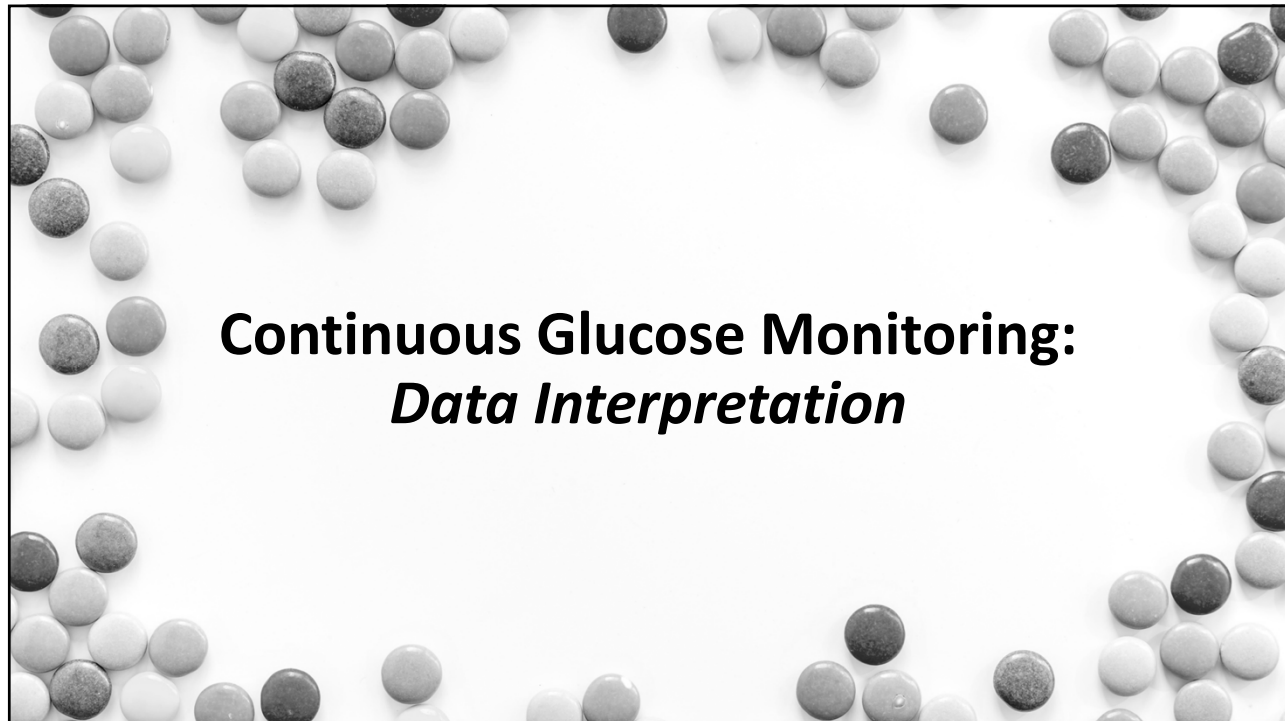
Ordering CGMs

- When should orders be sent to a DME supplier...
 - Medicare plans
 - While some Medicare Advantage can be sent to the pharmacy, a DME company may ensure the lowest co-pay



Log In to Parachute Health

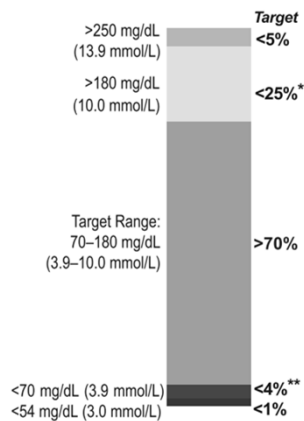
58



Continuous Glucose Monitoring: *Data Interpretation*

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Key Metrics: T1DM & T2DM



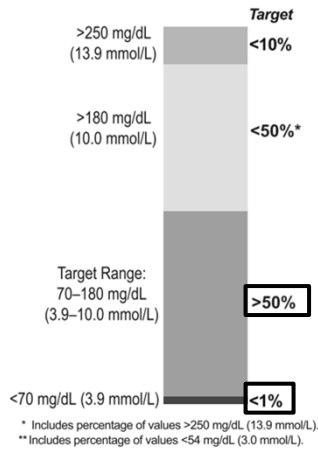
* Includes percentage of values >250 mg/dL (13.9 mmol/L).
** Includes percentage of values <54 mg/dL (3.0 mmol/L).

Minimum number of days CGM is worn 14 days is recommended.
Percentage of time CGM is active is at least 70% of the time.
Average glucose (if goal A1c is < 7%) of < 154 mg/dL is recommended.
Glucose management indicator (GMI) is estimating the next A1c (if data remained similar for 2-3 months).
Coefficient of variation (CV) is a measure of glycemic variability and a CV > 36% is considered unstable.

References/Works cited: ADA. *Diabetes Care*. 2023;46:S111-127.

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Key Metrics: *Older/Frail* T1DM & T2DM

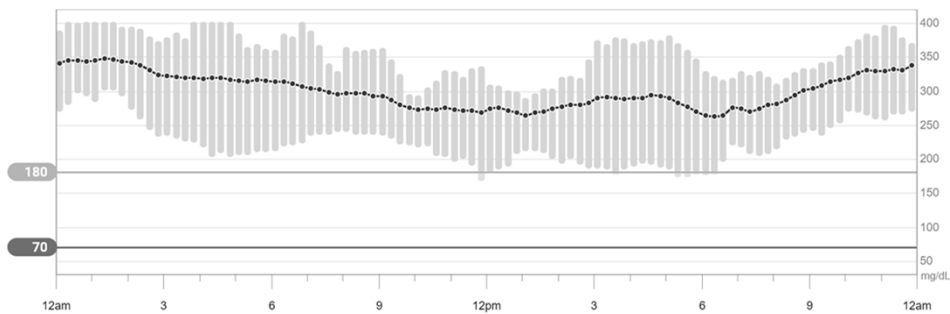


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References/Works cited: ADA. *Diabetes Care*. 2023;46:S111-127.

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Individualizing Regimens: *Example 1*

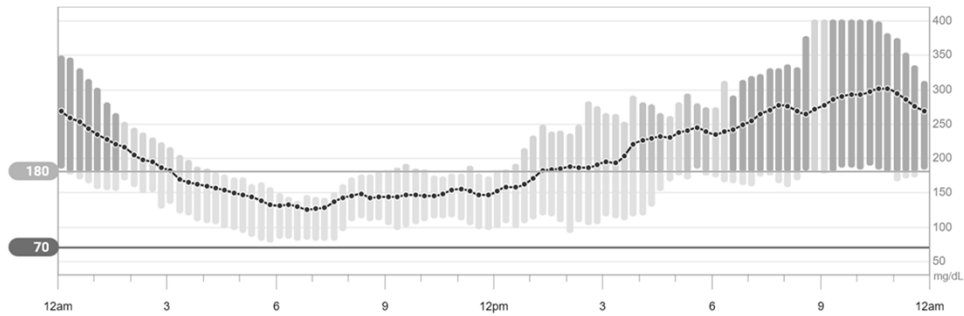


Patient's regimen:

1. Metformin 500 mg 2 tablets twice daily
2. Jardiance 25 mg 1 tablet once daily
3. Pioglitazone 30 mg 1 tablet once daily

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Individualizing Regimens: *Example 2*

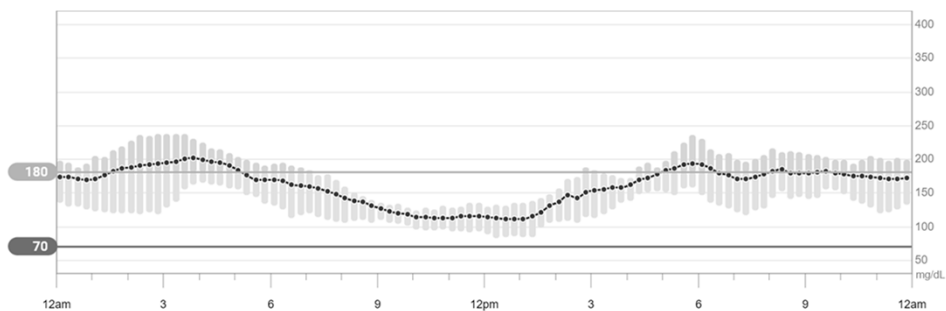


Patient's regimen:

1. Metformin 500 mg 2 tablets twice daily
2. Ozempic 2 mg SQ once weekly
3. Lantus 50 units once daily

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Individualizing Regimens: *Example 3*



Patient's regimen:

1. Metformin 500 mg 2 tablets twice daily
2. Lantus 40 units twice daily
3. Novolog 10 units three times daily before meals

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When poll is active, respond at pollev.com/ou321
 Text **OU321** to **37607** once to join

Which of the following is TRUE regarding the required criteria for coverage of continuous glucose monitoring devices for Medicare patients?

Patients must be on multiple daily doses of insulin.
 Patients can be on any amount and/or frequency of insulin.
 Patients must have recurrent, documented grade 1 lows (< 70).
 Patients can have a pre-diabetes diagnosis.

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

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When poll is active, respond at pollev.com/ou321
 Text **OU321** to **37607** once to join

Which of the following is TRUE regarding the different continuous glucose monitoring devices on the market?

FreeStyle Libre 3 reader is not yet available in retail pharmacies.
 Dexcom G7 should be applied to the abdomen in patients 7 years and older.
 FreeStyle Libre 2 must be scanned at least once daily to avoid gaps in data.
 Dexcom G6 receiver must be within 50 feet of the sensor for data to display.

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

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When poll is active, respond at pollev.com/ou321
Text **OU321** to **37607** once to join

Which of the following is TRUE regarding key metrics when interpreting continuous glucose monitoring data?

Time in range (70-180) is recommended to be > 50% for all diabetes patients.

Time below range (< 70) is recommended to be < 5% for older/frail patients.

Glucose management indicator (GMI) is a measurement of glycemic variability.

Percentage of time the CGM is active should be at least 70% to interpret data.

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

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Conclusion and Clinical Pearls

- CGMs overcome many limitations of A1c and FSBG monitoring; evidence of improving glycemic control has more recently expanded to T2DM patients.
- Medicare and Medicaid criteria for CGM coverage recently changed to any “insulin-treated” patients or those with “problematic hypoglycemia.”
- Key metrics and trends can be assessed to better personalize treatment regimens.
- There are several CGM products to consider for patients. **Always keep in mind that “technology can either *empower* or *burden* patients”.**

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What changes do you intend to make in your practice as a result of this activity?

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

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Additional Resources

- Centers for Medicare & Medicaid Services (Updated 2023, February 23). Glucose Monitors. CMS.gov. [LCD - Glucose Monitors \(L33822\)](https://www.cms.gov/medicare/coverage/determination-process/lcds/lcd-33822) (cms.gov).
- Dexcom. (2023). [Dexcom G7 CGM - Powerfully simple diabetes management | Dexcom](https://www.dexcom.com/usa/learn-more).
- FreeStyle Libre. (2023). [Continuous Glucose Monitoring \(CGM\) | FreeStyle Libre \(CGM\) systems](https://www.libre.com/usa/learn-more).
- Parachute Health. (2023). [Parachute Health - Order Medical Equipment & Supplies](https://www.parachutehealth.com/usa/learn-more).
- American Diabetes Association. 7. Diabetes Technology: Standards of Care in Diabetes – 202. Diabetes Care 2023;46:S111-127.
- Grunberger G, Sherr J, Allende M, et al. American Association of Clinical Endocrinology Clinical Practice Guideline: The Use of Advanced Technology in the Management of Persons with Diabetes Mellitus. Endocr Pract 2021;27:505-37.

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12. American Diabetes Association. 6. Glycemic Targets: Standards of Care in Diabetes – 202. *Diabetes Care* 2023;46:S111-127.
13. American Diabetes Association. Health Equity and Diabetes Technology: A Study of Access to Continuous Glucose Monitors by Payer, Geography and Race Executive Summary. [ADA-CGM-Utilization-White-Paper-Oct-2022.pdf \(diabetes.org\)](#)
14. American Diabetes Association. Health Equity and Diabetes Technology: A Study of Access to Continuous Glucose Monitors by Payer and Race Executive Summary. [ADA-CGM-Utilization-White-Paper.pdf \(diabetes.org\)](#).
15. Centers for Medicare & Medicaid Services. (2023). [LCD - Glucose Monitors \(L33822\) \(cms.gov\)](#).
16. American Diabetes Association. 7. Diabetes Technology: Standards of Care in Diabetes – 202. *Diabetes Care* 2023;46:S111-127.

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The Sweet Accessibility of Continuous Glucose Monitors

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Clinical Pharmacy Specialist, Integris Health

Walter P. Scheffe CPE Series
October 29, 2023

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