CGM AND OTHER DIABETES TECHNOLOGY

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DISCLOSURES

- No conflicts to disclose

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OBJECTIVES

- Select an appropriate patient for continuous glucose monitoring
- Identify elements of continuous glucose monitor reports and interpret data for clinical use
- Recognize available diabetes technology options including integrated systems
- Illustrate possible solutions to common CGM issues such as sensor adhesion, skin irritation, and accuracy concerns

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CONTINUOUS GLUCOSE MONITORING

THE BASICS

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NOTABLE ABBREVIATIONS AND DEFINITIONS

SMBG: Self-monitoring of blood glucose

CGM: Continuous glucose monitor

rtCGM: Real-time CGM -- Systems that measure and display glucose levels continuously.

isCGM: Intermittently scanned CGM -- Systems that measure glucose levels continuously but only display glucose levels when swiped by a reader or a smart device.

Personal CGM: Owned by the person with diabetes and used to make management decisions.

Professional CGM: Owned by the clinic and worn by the person with diabetes (generally 7-14 days). Data may be blinded or visible to the person wearing the device.

American Diabetes Association. 7. Diabetes Technology: Standards of Medical Care in Diabetes – 2021. Diabetes Care. 2021;44(suppl 1):S85-S99.
Personal Continuous Glucose Monitoring Implementation Playbook. https://www.diabeteseducator.org/practice/practice-tools/app-resources/professional-cgm-playbook

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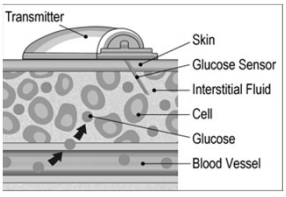
CGM BASICS

- **Sensor**: Part of CGM system inserted under the skin to measure interstitial glucose levels
- **Transmitter**: Reusable or disposable transmitter connected to the sensor that allows the system to transmit glucose readings to another device that displays glucose data
- **Receiver/Reader**: Device that receives glucose data from transmitter for viewing an interpretation



Personal Continuous Glucose Monitoring Implementation Playbook. https://www.diabeteseducator.org/practice/practice-tools/app-resources/professional-cgm-playbook
Image: https://www.nbdiabetes.org/news/continuous-glucose-monitoring-system-cgms

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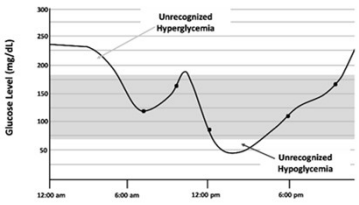
CGM ADDRESSES LIMITATIONS OF A1C AND SMBG

Concept: picture vs. video



Juvenile Diabetes Research Foundation. Using Continuous Glucose Monitoring to Improve Outcomes for Your Patients. https://www.jdrf.org/t1d-resources/hcp/

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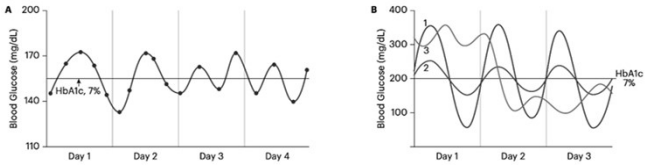
LIMITATIONS WITH USING HBA1C AS INDICATOR OF GLYCEMIC CONTROL



Juvenile Diabetes Research Foundation. Using Continuous Glucose Monitoring to Improve Outcomes for Your Patients. https://www.jdrf.org/t1d-resources/hcp/

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DIFFERENT AND ACCURATE

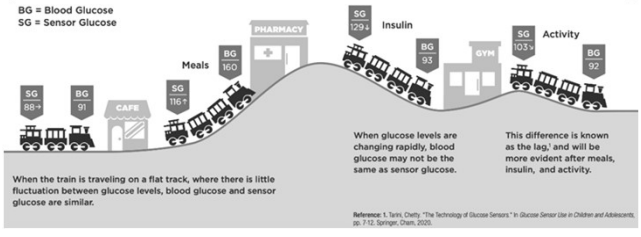

Image: https://provider.myfreestyle.com/pdf/Brochure-FSL2-Adult-Getting-Started-Guide-mini.pdf

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CONSIDERATIONS FOR CANDIDATE SELECTION

Randomized controlled trials have demonstrated:

- Decreases in hemoglobin A1c (HbA1c)
- Increased time in range (TIR; 70-180 mg/dL)
- Decreased glycemic variability
- Decreased time in hypoglycemia
- Reduction in hypoglycemic events

People who may benefit (T1D or T2D)

- Taking multiple daily injections of insulin
- Using an insulin pump
- Experiencing frequent hypoglycemia
- Presence of hypoglycemia unawareness
- High degree of glycemic variability
- Difficulty achieving individualized glycemic goals

American Diabetes Association. 7. Diabetes Technology: Standards of Medical Care in Diabetes – 2021. Diabetes Care. 2021;44(suppl 1):S85-S99.
Personal Continuous Glucose Monitoring Implementation Playbook. https://www.diabeteseducator.org/practice/practice-tools/app-resources/professional-cgm-playbook

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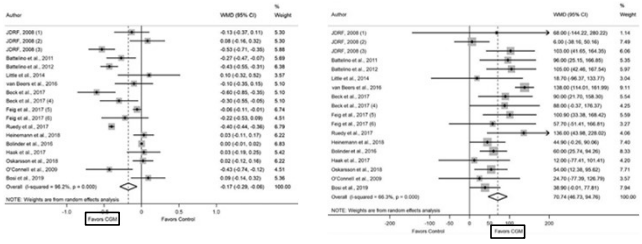
BENEFITS OF CGM ON HBA1C AND TIR



Maiorino MI, Signoriello S, Maio A, et al. Diabetes Care. 2020;43:1146-1156.

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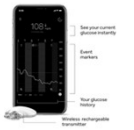
PERSONAL CGM DEVICES

Abbott Freestyle Libre 14-day

Abbott Freestyle Libre 2



Medtronic Guardian Connect

Dexcom G6

Senseonics Eversense

Images: Image Sources: https://www.freestyle.abbott/us-en/home.html; www.dexcom.com; www.medtronic.com; www.eversensediabetes.com

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KEY FEATURES OF PERSONAL CGM DEVICES

	Abbott Freestyle Libre 14 day	Abbott Freestyle Libre 2	Dexcom G6
Approved Age (years)	≥18	≥4	≥2
Calibrations	None	None	None (can calibrate as needed)
Approved Site	Arm	Arm	Abdomen*
Sensor wear (days)	14	14	10
Available frequency of glucose measurement	Every Minute	Every Minute	Every 5 minutes
Real time Alarms/Alerts	No	Yes	Yes
Insulin pump integration	No	Not yet available	Yes (Tandem t:slim X2)
Software compatibility	Reader, Apple and Android Smartphones	Reader, Apple Smart phones, Android soon	Receiver, Apple and Android smartphones, Smartwatches
Interfering substances	Vitamin C, Salicylic Acid	Vitamin C	Hydroxyurea

*buttocks for age 2-17

American Diabetes Association. 7. Diabetes Technology: Standards of Medical Care in Diabetes – 2021. Diabetes Care. 2021;44(suppl 1):S85-S99.
Personal Continuous Glucose Monitoring Implementation Playbook. https://www.diabeteseducator.org/practice/practice-tools/app-resources/professional-cgm-playbook
Kravarusic J, Alsaggo G. Endocrinol Metab Clin North Am. 2020;49:37-55.

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CONTINUOUS GLUCOSE MONITORING

AMBULATORY GLUCOSE PROFILE INTERPRETATION

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AMBULATORY GLUCOSE PROFILE REPORT


AGP Report

Name

MRN

GLUCOSE STATISTICS AND TARGETS

14 days
% Sensor Time

Glucose Ranges — Targets (% of Readings (Time/Day))
Target Range 70–180 mg/dL ..... Greater than 70% (16h 48min)
Below 70 mg/dL ..... Less than 4% (58min)
Below 54 mg/dL ..... Less than 1% (14min)
Above 180 mg/dL ..... Less than 25% (6h)
Above 250 mg/dL ..... Less than 5% (1h 12min)

Each 5% increase in time in range (70–180 mg/dL) is clinically beneficial.

Average Glucose
Glucose Management Indicator (GMI)
Glucose Variability
Defined as percent coefficient of variation (%CV); target ≤36%

TIME IN RANGES

Type 1 & Type 2 Diabetes

Target >70%

American Diabetes Association. 6. Glycemic Targets: Standards of Medical Care in Diabetes – 2021. Diabetes Care. 2021;44(suppl 1):S73-S84.

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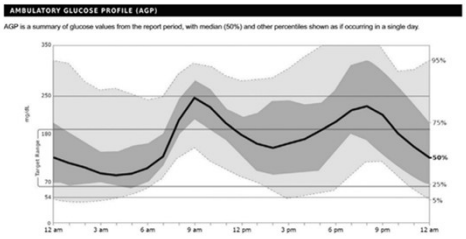
AMBULATORY GLUCOSE PROFILE



https://www.diabeteseducator.org/docs/default-source/practice/educator-tools/cgm-playbooks/personal-cgm-playbook.pdf?sfvrsn=2

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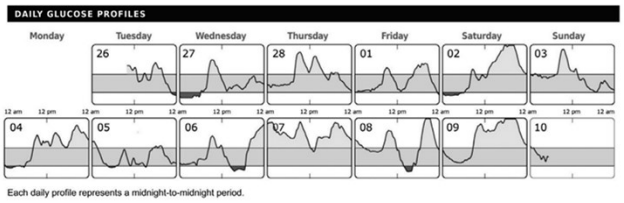
DAILY GLUCOSE PROFILES



https://www.diabeteseducator.org/docs/default-source/practice/educator-tools/cgm-playbooks/personal-cgm-playbook.pdf?sfvrsn=2

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KEY METRICS FOR REVIEWING DATA

Key Metric	Description	Most T1DM/T2DM	Older/High Risk T1DM/T2DM
Number of days CGM worn		14 days	14 days
Percentage of time CGM active		70% of data from 14 days	70% of data from 14 days
Mean glucose		Individualized	Individualized
Glucose management indicator	Estimate of current HbA1c level	Individualized	Individualized
Coefficient of variation	Measurement of glycemic variability	≤36%	≤36%
Very high time above range (TAR)	% and time > 250 mg/dL	<5%	<10%
High time above range (TAR)	% and time 181 - 250 mg/dL	<25%	
Time in range (TIR)	% and time 70 - 180 mg/dL	>70%	>50%
Low time below range (TBR)	% and time 54 - 69 mg/dL	<4%	<1%
Very low time below range (TBR)	% and time <54 mg/dL	<1%	0%

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, Endocrine Practice. 2021; 27(6): 505-537. https://doi.org/10.1016/j.eprac.2021.04.008.

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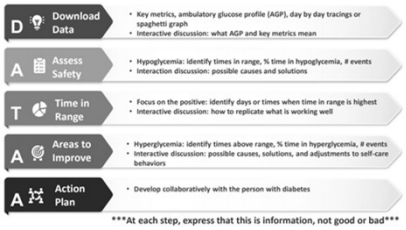
REVIEWING CGM DATA WITH PATIENTS



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CONTINUOUS GLUCOSE MONITORING

BILLING FOR PHARMACISTS

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GENERAL INSURANCE COVERAGE

	Medicare	Medicaid	Commercial
Criteria	1 - 3+ injections of insulin daily and Checking blood sugar 1 time daily and Seen by provider every 6 months	Type 1 diabetes Type 2 diabetes* *dependent on specific Medicaid criteria	Highly variable coverage No co-pay assistance cards available May have a preferred CGM for patients with type 2 diabetes
Where	Usually DME	DME or Pharmacy	DME or Pharmacy

Key points:
- Insurance criteria for CGMs is changing frequently
- Insurance companies differ regarding whether CGMs should be a medical or pharmacy benefit

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ORDERING PROCESS- MEDICARE/MEDICAID

- Office visit (face to face or virtual) within 100 days; notes must include the following:
  - Diagnosis (T1DM or T2DM or other)
  - Testing frequency (1+ time per day)
  - Insulin regimen (3+ injections/day or insulin pump)
  - Patient requires frequent adjustments of the insulin treatment regimen, based on therapeutic CGM test results
- Complete Standard Written Order (SWO); DME supplier to provide this
- Fax SWO and chart notes to DME supplier
- Example phrasing: JW has type 2 diabetes and tests blood sugars 3 times per day. He is taking a combination of basal and prandial insulin with a total of four injections per day. He uses a sliding scale regimen for his prandial insulin (2 units per 50 mg/dL above 150 mg/dL) and requires frequent adjustments of the insulin treatment regimen, based on therapeutic CGM test results.

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ORDERING CGM

Freestyle Libre OR Libre 2

- FreeStyle Libre 14-day or Libre 2 Sensors (quantity: 2/28 days; PRN refills) **AND**
- FreeStyle Libre 14-day or Libre 2 Reader (quantity: 1; refills not required)
- Note: Libre 14-day sensors/reader and Libre 2 sensors/reader are **NOT** interchangeable

Dexcom G6 CGM

- Dexcom G6 Sensors (quantity: 3 per 30 days or 9 for 90 days; PRN refills) **AND**
- Dexcom G6 Transmitter (quantity: 1 per 90 days; PRN refills) **AND**
- Dexcom G6 Receiver (quantity: 1; refills not required)

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SETTING PATIENT EXPECTATIONS

- Insurance approval is NOT guaranteed
- CGM approval through insurance can take 1-2 months depending on insurance (although approval can occur immediately)

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BILLING FOR CGM SERVICES

CPT Code	Description	Who Performs
95249 Personal-use CGM startup/training	Requires documented ambulatory CGM data for a minimum of 72 hours Patient-provided equipment, sensor placement, hook-up, calibration and monitor, patient training, and printout of recording	Any trained health care professional (e.g., nurses, certified diabetes care and education specialists, pharmacists)
95250 Professional-use CGM placement	Requires documented ambulatory CGM data for a minimum of 72 hours Physician or other qualified health care professional (office)-provided equipment, sensor placement, hook-up, calibration of monitor, patient training, removal of sensor, and printout of recording	Any trained health care professional (e.g., nurses, certified diabetes care and education specialists, pharmacists)
95251 Personal- and professional-use CGM interpretation	Requires documented ambulatory CGM data for a minimum of 72 hours; analysis, interpretation, and report	A physician or licensed non-physician provider as outlined by their scope of practice in individual state practice acts

Centers for Medicare & Medicaid Services. https://www.cms.gov/apps/physician-fee-schedule/overview.aspx

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BILLING FOR CGM SERVICES

CPT Code	Medicare physician office fee schedule	Private Payer (2021 averages)
95249 – Personal-use CGM startup/training *Bill only once during the time period that the patient owns device*	$59.87	$128
95250 – Professional-use CGM placement *Do not bill more than 1x/month*	$151.57	$309
95251 – Personal- and professional-use CGM interpretation *Do not bill more than 1x/month*	$35.30	$97
99212-99215 – Established patient in non facility or office setting *Appropriate billing determined by office*	$57.45 – $183.07	$87 – $288

Centers for Medicare & Medicaid Services. https://www.cms.gov/apps/physician-fee-schedule/overview.aspx
Dexcom. https://provider.dexcom.com/coding

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CONTINUOUS GLUCOSE MONITORING

PATIENT CONSIDERATIONS

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PATIENTS MOST LIKELY TO BENEFIT FROM CGM

- Type 1 Diabetes
- Type 2 diabetes with at least 1 of the following:
  - On an intensive insulin regimen (multiple daily injections or insulin pump)
  - History of severe hypoglycemia or hypoglycemia unawareness
  - High degree of glycemic variability/Unclear glycemic pattern
  - Difficulty achieving individualized glycemic goals
  - Discordant A1c and SMBG
  - Need for monitoring of recent glycemic changes (lifestyle change, pre-surgery, etc)

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OTHER PATIENT CONSIDERATIONS

- Need for alerts for high/low glucose
- Cost/Coverage
- Ability/Desire to use technology
- Ability to share glycemic data with provider (computer, smartphone, or ability to come to clinic)
- Integrated Technology (insulin pumps, smart insulin pens, other diabetes technology, smartphone, smartwatch)
- Ability to reliably scan intermittent CGM if this is chosen
- Tolerability of Sensor and Adhesive
- Choice between personal use CGM and professional CGM

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CONTINUOUS GLUCOSE MONITORING

TROUBLESHOOTING

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ADHESION

- Make sure that the site is clean and free of any lotions, creams, or oils prior to placing sensor
- Over-the-top adhesives (e.g. Tegaderm™)
  - Place over or around the sensor or infusion set after insertion and reapply as needed.
- Liquid Adhesive (e.g. Skin-Tac™)
  - Place on the skin prior to the sensor or infusion set to help it stick.
  - Make sure these are completely dry on the skin before placing site
- Non-adhesive options (e.g. Ace™ or Coban™)
  - If unable to tolerate adhesive products or to protect the site if needed.
  - Make sure to wrap loosely and generally for short term use only; remove at night to avoid compression

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SITE IRRITATION

- Important to clarify if irritation is occurring during sensor wear or after removal to determine if possibly related to reaction to adhesive versus a result of skin stripping with removal
- Steroid nasal spray (e.g. fluticasone)or other steroid applied topically
  - Spray over entire site and allow to dry completely before placing new sensor or infusion set
  - Creams and ointments can be used for irritation after removing the adhesive but will likely make it harder for the device to stay in place if used under sensor
- Barriers/Tapes/Hydrocolloid pad (e.g. Tegaderm™)
  - Place barrier first, then sensor over the top so that the adhesive is not in direct contact with the skin
- Adhesive remover (e.g. mineral oil or Tac Away ® wipes)
  - Removes adhesive, reduces irritation and skin stripping
  - Use to help remove sensor and adhesive then wipe skin to remove any remaining residue
- Barrier wipes (e.g. Smith and Nephew™ IV Prep)
  - Use to prevent irritation, adhesive buildup, friction, or abrasion
  - Wipe site and allow to dry completely before placing the sensor
- Oral antihistamine
  - May take consistently or as needed for symptoms

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CGM ACCURACY

- Mean Absolute Relative Difference (MARD)
  - ≤10% is appropriate for insulin dosing
  - Most current systems have MARD 8-10%
- Sensor readings lag ~5-10 minutes behind which can be meaningful, particularly in times of rapid glucose change
  - Calibration may worsen accuracy if done incorrectly
    - Calibration (if required by the system or if needed due to sensor inaccuracy) is an input of a fingerstick blood glucose
    - Calibration can be done when glucose stable and reading is consistently high or consistently low
- Sensor placement can matter
  - MARD is at the approved sensor sites
  - Other sites have been studied or used by patients off-label but encourage monitoring for accuracy in these situations
    - One study with alternate sites for Libre 14 day found similar accuracy on the upper thigh but worsened accuracy on the abdomen
- Accuracy varies by day of sensor wear with first day often having more accuracy concerns

Diabetes Care 2017; 40(12):1631-1640
Diabetes Obes Metab 2018; 20:1503–1507

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CGM ACCURACY

- Interfering Substances
  - Dexcom G6™
    - Hydroxyurea causes false elevations
    - Acetaminophen >1000 mg q6h may falsely elevate sensor readings
  - Freestyle Libre™
    - Vitamin C: >500 mg/day may falsely elevate sensor reading
    - Aspirin: >650 mg may falsely lower sensor reading – Libre 14 day
  - Medtronic Guardian™
    - Acetaminophen may falsely elevate sensor reading
    - Hydroxyurea may falsely elevate sensor reading
  - Eversense®
    - Tetracycline may falsely lower sensor reading
    - Mannitol may falsely elevate sensor reading

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CGM ACCURACY

- Main points for patients:
  - If sensor reading does not match symptoms, then double check with fingerstick!
  - * Do NOT calibrate the sensor when glucose is rapidly changing
  - If significantly inaccurate – call the manufacturer
  - If the sensor requires calibration make sure to calibrate as directed
  - Accuracy may be affected by sensor site placement if using off-label

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INTEGRATED DIABETES TECHNOLOGY

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SMART INSULIN PENS

- General Components
  - Insulin delivery with pens or cartridges
  - CGM connection
  - Smartphone app
- Patient Considerations
  - Patient with need/want for insulin dose tracking or dose calculation assistance
  - Reduce risk of insulin stacking
  - Reduce risk of accidental duplicate or missed doses
  - Improve adherence to more complex dosing regimen

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INPEN™

- Smart insulin pen paired with InPen™ app
  - Tracks insulin doses and active insulin
  - Can assist with dose calculation for mealtime insulin
  - Works with Novolog®, Fiasp®, or Humalog® cartridges but functions like a typical insulin pen in delivering insulin
  - Can include reminders and alerts in the app
  - Able to pair with CGM (Dexcom or Medtronic Guardian™Connect) and generate reports for personal or healthcare team review

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BIGFOOT UNITY™ SYSTEM

- Smart insulin pen caps
  - One for long acting insulin (black cap)
  - One for rapid acting insulin (white cap)
  - Connect to Bigfoot Unity™ Mobile App
  - Works with all major brands of insulin pens available in the US
- Connects with Freestyle Libre™ 2 CGM system and backup glucose meter from Bigfoot
  - Provides dose recommendation based on health care provider instructions and glucose reading
  - Scan Libre™ 2 sensor with the insulin pen cap

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INSULIN PUMPS

- General Categories
  - Non-integrated pumps: No direct connection between pump and CGM though can be used simultaneously
  - Patch pumps: Tubeless insulin delivery systems
  - Sensor-augmented pumps: Use a pump and a CGM together but utilizes user settings and inputs only for insulin delivery
  - Sensor-integrated pumps: Use a pump and CGM together with algorithm to adjust pump based on CGM data
    - Low glucose suspend/predictive low glucose suspend
    - Automated insulin delivery: Hybrid closed loop

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INSULIN PUMPS - NON-INTEGRATED PATCH PUMPS

V-Go®
- 24 hour patch pump
- Set basal rate
- Weight-based initiation (20, 30, 40)
- 2 unit increment bolus up to 36 units total per day

Cequr Simplicity™
- Patch pump
- Only delivers bolus doses; no basal rate
- Up to 3 days of wear
- 2 unit increment bolus
- 200 unit reservoir

Omnipod Dash®
- Patch pump
- Up to 72 hours® of wear
- 200 unit reservoir
- Traditional insulin pump
  - Basal rates
  - Bolus calculator
    - Carb ratio
    - Correction Factor/Insulin Sensitivity Factor

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INSULIN PUMPS – INTEGRATED PUMPS – TYPE 1 DIABETES

Tandem t:slim X2™
- Integrated with Dexcom® G6
- Basal-IQ
  - Predictive Low Glucose Suspend: Target 80 mg/dL
- Control-IQ
  - Basal rate automatically adjusts based on CGM
  - Auto correction boluses are delivered if glucose exceeds upper limit

Medtronic Minimed™ 670G, 770G, 780G
- Uses Medtronic Guardian™ Sensor 3 CGM
- Basal rate automatically adjusts based on CGM
- Adjustable targets with 770G and 780G
- 780G to also have automated correction bolus

Omnipod® 5
- Patch pump
- Integrated with Dexcom® G6
- Smartphone app to control system
- Customizable target
- Microbolus every 5 minutes based on 60 minute glucose prediction and target

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INSULIN PUMPS

- Patient Considerations
  - Affordability/coverage
  - Insulin requirements/Pump reservoir limits
  - Ability to safely manage device
  - Intensive insulin regimen with frequent glucose monitoring
  - Most insulin pumps deliver basal and bolus with rapid acting insulin
    - Calculating insulin quantity needed: total daily dose + amount needed for tube filling/waste
  - Most insulin pumps use carb ratio and correction factor/insulin sensitivity factor for dose calculation
  - Not all rapid acting insulins are approved for use in every pump

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POST-TEST QUESTIONS

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QUESTION #1

Which of the following is a benefit of continuous glucose monitoring?

a. Improvement in A1c
b. Decrease in hypoglycemia in patients with type 1 diabetes with tight glycemic control
c. Improvement in diabetes distress and patient satisfaction
d. All of the above

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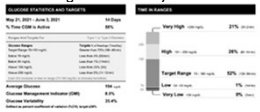
QUESTION #2

Based on the following AGP for a 55 year old male with recent A1c 7.1%; which is the best conclusion



1. The A1c is inaccurate
2. The CGM data is inaccurate
3. The patient is not scanning enough to use CGM data to evaluate overall glycemic control
4. The patient has reasonable glycemic control and the A1c correlates well

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QUESTION #3

A patient with Type 1 diabetes is currently using a Dexcom™ G6 CGM with an insulin regimen of Lantus 16 units nightly and Novolog before meals based on a carb ratio of 1:15 and correction of 1:50. He would like to know about technology options that may help him with calculating his bolus dose as reducing risk of hypoglycemia from stacking insulin. Which of the following technology options would be best to consider?

a. InPen™
b. Bigfoot Unity™ system
c. Novopen Echo®
d. Eversense®

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QUESTION #4

A patient has been using their CGM for the past 6 months. They are diligent about rotating and cleaning the sensor site, but are having issues with the sensor adhesive loosening after the first 72 hours. Which of the following options is most appropriate for the patient?

a. Apply fluticasone nasal spray over the entire sensor site before applying the sensor
b. Place a liquid adhesive on the skin prior to sensor application
c. Use a protective film wipe topically before applying the sensor
d. Tightly wrap an Ace™ wrap over the sensor when it starts to loosen

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QUESTIONS?

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APPENDIX SLIDES

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OVERCOME BARRIERS TO CGM

- **Alarm fatigue**
  - Work together to configure optimal settings
- **Becoming overwhelmed with the data**
  - Focus on time in range
- **Privacy Concerns**
  - Set boundaries and guidelines for sharing data
- **Device placement and skin issues**
  - Avoid placing in areas of friction or with broken, irritated skin
  - Clean with oil-free, antimicrobial soap and dry thoroughly
- **Cost and access concerns**
  - Several manufacturer discount and special programs
  - Help people with diabetes determine if they have insurance coverage
    - https://diabeteswise.org/guide-qualify-for-insurance
  - Help people with diabetes understand their costs
    - https://diabeteswise.org/how-to-get-a-sensor#understand-your-costs

Anderson JE, Gavin JR, Kruger FD. Current eligibility requirements for GCM coverage are harmful, costly, and unjustified. Diabetes Technol Ther. 2020;22(3):169-173.
Messer LH, Berget C, Beatson C, Polsky S, Forlenza GP. Preserving skin integrity with chronic device use in diabetes. Diabetes Technol Ther. 2018;20(S2):S254-S264.

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SUMMARY

	Libre	Libre 2	Dexcom G6
MARD (Accuracy)*	9.4%	9.2%	9.0%
Ability to Share Data in Real Time Remotely/App Availability	Yes	Not available yet- FDA approval for app applied for and pending	Yes
Alarms	No	Yes- available every minute	Yes
Interfering Substances	Vitamin C, Salicylic Acid	Vitamin C	Hydroxyurea
Approved Sites for Sensors	Arm- subcutaneous	Arm- subcutaneous	Abdomen- subcutaneous
Sensor Warm Up Period	1 hour	1 hour	2 hours
Sensor Wear	14 days	14 days	10 days
Age Approved For	Adults ages 18 and up	Adults & children age 4 and up	Adults & children age 2 and up

**MARD = mean absolute relative difference (lower is better)*

https://www.diabeteseducator.org/practice/practice-tools/app-resources/professional-cgm-playbook

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FreeStyle Libre Data Sharing

https://www.freestylelibre.us/content/dam/bss/divisionalsites/adc/document/digital_patient_to_practice_instructional_pdf_piece.pdf

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Dexcom Data Sharing

https://s3-us-west-2.amazonaws.com/dexcompdf/G6-CGM-Users-Guide.pdf

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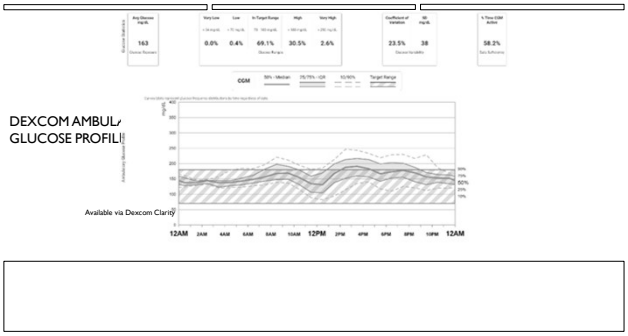
DEXCOM AMBULA
GLUCOSE PROFILE
Available via Dexcom Clarity

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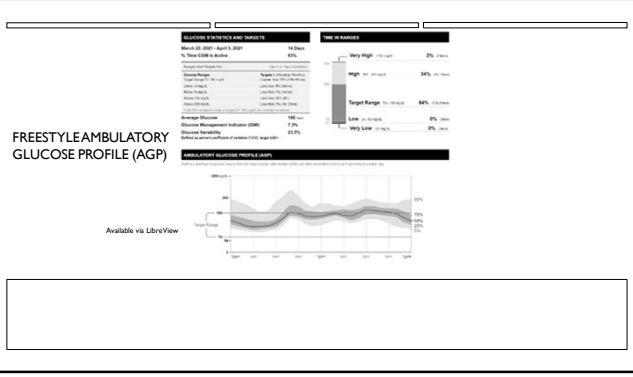
FREESTYLE AMBULATORY
GLUCOSE PROFILE (AGP)
Available via LibreView

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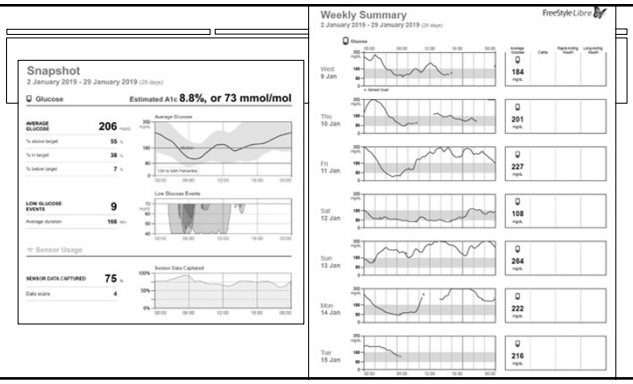
Snapshot
Weekly Summary

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TREND ARROWS

Reader	Glucose Direction	Change in Glucose
↑	Rising quickly	**Glucose is rising quickly** Increasing >2 mg/dL/min or >60 mg/dL in 30 minutes
↗	Rising	**Glucose is rising** Increasing 1–2 mg/dL/min or 30–60 mg/dL in 30 minutes
→	Changing slowly	**Glucose is changing slowly** Not increasing/decreasing >1 mg/dL/min
↘	Falling	**Glucose is falling** Decreasing 1–2 mg/dL/min or 30–60 mg/dL in 30 minutes
↓	Falling quickly	**Glucose is falling quickly** Decreasing >2 mg/dL/min or >60 mg/dL in 30 minutes
No arrow present indicates that the system cannot calculate the velocity and direction of the glucose change.		

Kudva YC, Ahmann AJ, Bergenstal RM, et al. Approach to using trend arrows in Freestyle Libre Flash glucose monitoring systems in adults. J Endocr Soc. 2018;2(12):1320-1337.

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