CGM 101: Strategies for Primary Care Providers and Ancillary Staff

Complimentary CE

Developed in collaboration

Med-IQ · The Leona M. and Harry B. Helmsley Charitable Trust · JDRF

Activity Overview

Join diabetes experts Alison Evert, MS, RD, CDE, and Anne Peters, MD, as they talk about how to start individuals with type 1 diabetes on continuous glucose monitoring from the primary care perspective. Learn more about the different devices, their benefits and limitations, how to interpret the data, and billing and insurance coverage considerations.

Target Audience

This activity is intended for primary care clinicians (primary care physicians, pediatricians, nurse practitioners, physician assistants, and nurses), pharmacists, endocrinologists, and certified diabetes educators.

Instructions to Receive Credit

To receive credit, read the introductory CE material, watch the webcast, and complete the evaluation, attestation, and post-test, answering at least 70% of the post-test questions correctly.

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Med-IQ is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

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This nursing activity has been approved for up to 0.5 contact hour.

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Accreditation / Designation Statements

Certified Diabetes Educators who successfully complete the activity will receive a Statement of Participation indicating the maximum *AMA PRA Category 1 Credit(s)™* awarded for the activity. The National Certification Board of Diabetes Educators (NCBDE) does not approve continuing education, continuing education activities must be diabetes related and approved by a provider on the NCBDE list of Approved Providers (www.ncbde.org).

Nurse practitioners, physician assistants, and other healthcare professionals who successfully complete the activity will receive a Statement of Participation indicating the maximum credits available.

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The content of this activity has been peer reviewed and has been approved for compliance. The faculty and contributors have indicated the following financial relationships, which have been resolved through an established COI resolution process, and have stated that these reported relationships will not have any impact on their ability to give an unbiased presentation.

Faculty Disclosure Statements

Alison Evert, MS, RD, CDE, has indicated no real or apparent conflicts.

Anne Peters, MD
Consulting fees/advisory boards: Abbott Laboratories, Becton, Dickinson and Company, Boehringer Ingelheim Pharmaceuticals, Inc., Eli Lilly and Company, Lexicon Pharmaceuticals, Inc., Livongo, MannKind Corporation, Merck & Co., Inc., Novo Nordisk, Omada Health, Inc., Optum, Inc., Sanofi-aventis U.S. Inc., Zafgen, Inc.
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Contracted research: AstraZeneca, Dexcom, Inc., MannKind Corporation

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Aaron J. Kowalski, PhD, has indicated no real or apparent conflicts.

Nicole Johnson, DrPH, MPH, MA, has indicated no real or apparent conflicts.

The peer reviewers and other activity planners have no financial relationships to disclose.

Statement of Need

In the United States, approximately 1.25 million individuals have type 1 diabetes (T1D), which includes about 200,000 youth (those younger than 20 years old) and more than 1 million adults (those age 20 and older). Among these individuals, only 17% of youth and 21% of adults are reaching their HbA1c goals. In addition, T1D is a challenging and demanding condition, and many individuals are burdened by insulin treatment plans, hypoglycemia concerns, and psychosocial issues. However, technological advances and new therapies continue to emerge that can help address patients' challenges and encourage them take a more active role in their care. Because the incidence of T1D is expected to increase to 5 million people by 2050, it is imperative that primary care clinicians stay up-to-date on all aspects of T1D care to improve patient outcomes, such as other measures to assess clinical outcomes; the role of continuous glucose monitoring, insulin pumps, and adjunctive therapies; and the importance of providing support for psychosocial issues.

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Learning Objectives

Upon completion, participants should be able to:

- Interpret downloaded data for currently available CGM devices
- Implement CGM in your primary care practice

Why Should Providers Be Interested in CGM for Their Patients with T1D?

- It provides a significant amount of information that can be used to manage diabetes and adjust therapy to optimize glucose levels
- Data can also be used to counsel the patient about lifestyle behavior changes
- *Providers can bill for the evaluation of glucose data, if noted in the patient's medical record*

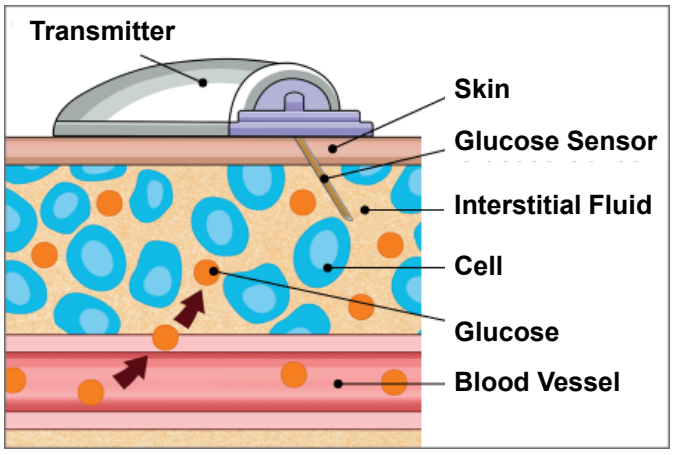
Kruger DF, et al. *Diabetes Educ*. 2019;45:3S-20S.

Why Are People with T1D Interested in CGM?

- It can eliminate finger sticks
- It provides trend arrows that help them adjust insulin doses
- Many devices alert patients about low (and high) glucose levels
- Direct-to-consumer marketing and social media have increased awareness of CGM

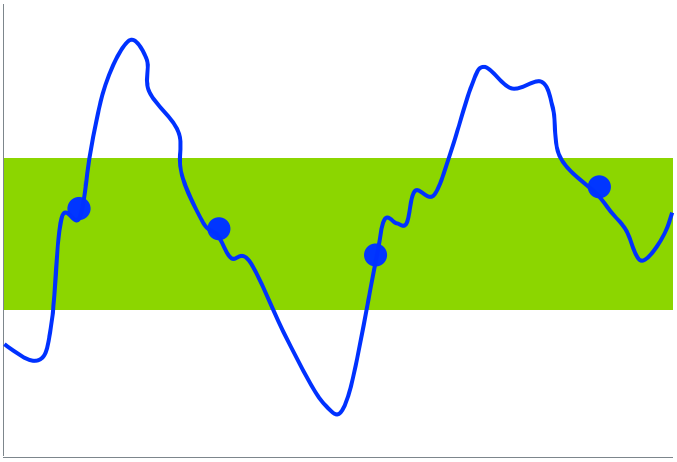
Kruger DF, et al. *Diabetes Educ.* 2019;45:3S-20S.

How CGM Measures Glucose



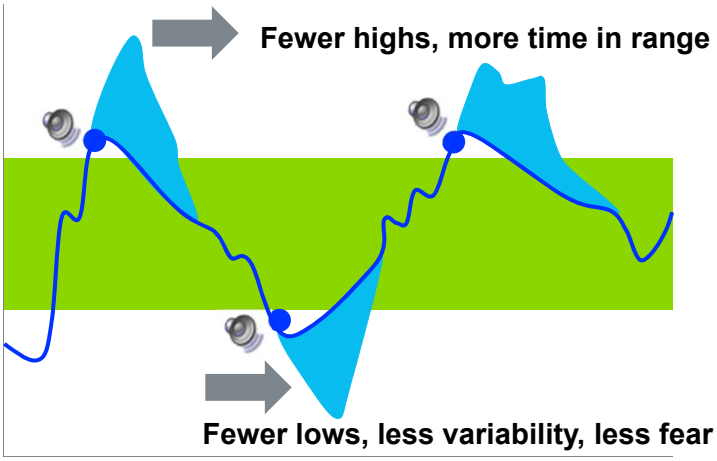
Burge MR, et al. *Diabetes Spectrum.* 2008;21:112-9. Petrie JR, et al. *Diabetes Care.* 2017;40:1614-21.
Device support. www.medtronicdiabetes.com/customer-support/sensors-and-transmitters-support/calibration-sensor

The Value of CGM



Burge MR, et al. *Diabetes Spectrum*. 2008;21:112-9.
Danne T, et al. *Diabetes Care*. 2017;40:1631-40.

The Value of CGM



Burge MR, et al. *Diabetes Spectrum*. 2008;21:112-9.
Danne T, et al. *Diabetes Care*. 2017;40:1631-40.

Benefits of CGM: What's the Evidence?

- Studies vary in terms of design (devices evolve faster than studies can be conducted) but have shown:
  - Reduction in HbA1c (seen in many studies with adults but required near continuous use of CGM)
  - More time in range
  - Reduction in time spent in hypoglycemia range
  - Improved quality of life (in some studies)

Peters AL, et al. *J Clin Endocrinol Metab*. 2016;101:3922-37.
Peters AL, et al. *J Endocrine Soc*. 2018;2:1214-25. ADA. *Diabetes Care*. 2019;42:S71-S80.

Barriers to CGM Adoption and Potential Pitfalls

- Adverse reactions and safety concerns
  - Sensor falling off unexpectedly, causing inability to receive glucose data
  - Alarm fatigue
  - Transmission issues at night
  - Silencing of alarms if smartphone is on vibrate or silent mode
  - Data fatigue (patient is overwhelmed by too much data about glucose 24/7)
  - Adhesive-related skin rashes and site reactions
  - Costs
  - Privacy-related concerns with wearing devices
  - Contraindications: remove the sensor before undergoing MRI, CT scan, x-ray, or diathermy treatment

Petrie JR, et al. *Diabetes Care*. 2017;40;1614-21.
Refer to device guides for product-specific details.

Types of CGM: Professional vs Personal

- **Professional CGM (blinded CGM)**
  - CGM is blinded to the user and is inserted and started in the office
  - Stores glucose data for 10 to 14 days
  - Data are downloaded by the healthcare provider for analysis
- **Personal CGM (real-time CGM)**
  - Owned and worn continuously by the patient, who inserts it at home
  - Provides the user with real-time glucose data on a receiver or a smartphone

Kruger DF, et al. *Diabetes Educ*. 2019;45:3S-20S.

Personal CGM Systems

Freestyle Libre 14 Day

Guardian Connect

Freestyle Libre 2

Eversense

G6

Refer to device guides for product-specific details.

Personal CGM Features

	G6	Libre 14 Day	Libre 2	Guardian G3	Eversense
Calibration	No	No	No	Yes	Yes
Warm up	2 hours	1 hour	1 hour	2 hours	24 hours
Duration of use	10 days	14 days	14 days	7 days	3 months
Alerts	Yes	No	Yes	Yes	Yes

Kruger DF, et al. *Diabetes Educ*. 2019;45:3S-20S.
Also refer to device guides for product-specific details.

Professional CGM Systems

iPro2 Professional Continuous Glucose Monitoring

G6 Pro Continuous Glucose Monitoring System

G4 Professional: Retrospective or Realtime Data

FreeStyle LibrePro Flash Glucose Monitoring System

Refer to device guides for product-specific details.

Data Interpretation

- Cloud-based software
- Desktop software
- Patient generated
  - Printed
  - PDF sent electronically

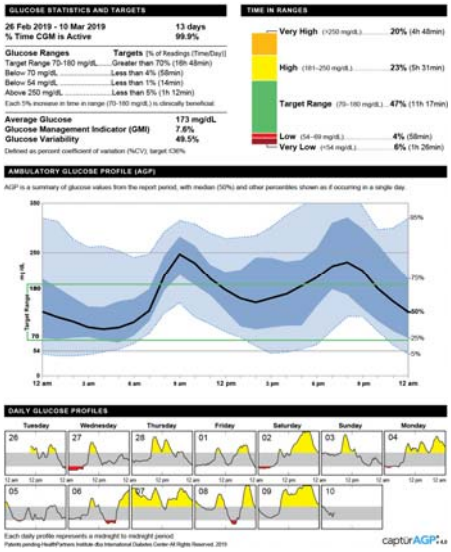
AADE. www.diabeteseducator.org/docs/default-source/practice/practice-resources/white-papers_test/aade-health-information-technologies--final.pdf?sfvrsn=2.

CGM Data Reports

- Although each CGM company generates different reports, the information is generally the same and includes:
  - Statistics/summaries
  - Time in range
  - Glucose profile/overlay
  - Daily view

Bergenstal RM. In Hirsch IB, et al. *Role of Continuous Glucose Monitoring in Diabetes Treatment*. 2018.

Ambulatory Glucose Profile View

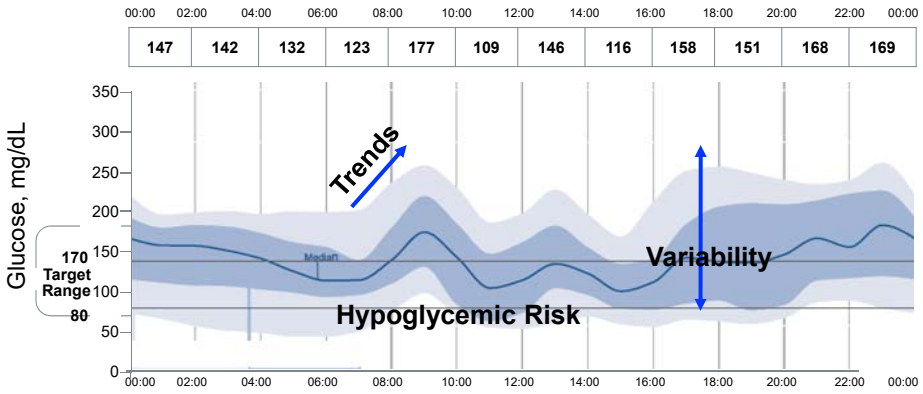


CGM Metrics Time in Range

CGM Profile or "Overlay"

CGM Daily View

Ambulatory Glucose Profile Graph Review: Glucose Profile/Overlay



Matthaei S, et al. *Br J Diabetes Vasc Dis*. 2014;14:153-7.

Steps for Interpreting an Ambulatory Glucose Profile

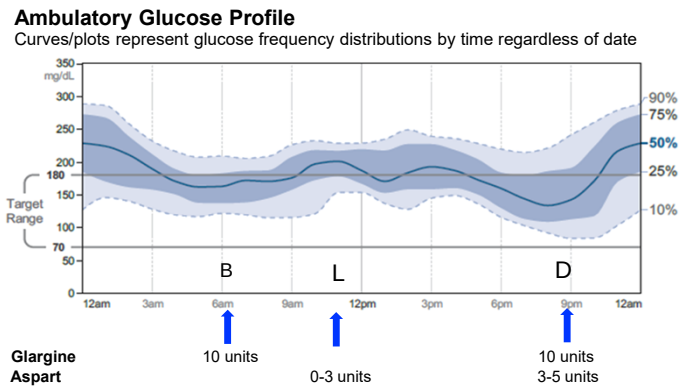
1. Determine whether data are adequate
2. Share data reports with patient
   - Time in range
   - Glucose overlay
   - Daily details
   - (Libre—frequency of scanning)
3. Mark the page—identify meals, medications, sleep, physical activity, etc.
4. Look for patterns (eg, lows and highs)
5. Develop action plan

Bergenstal RM. In Hirsch IB, et al. *Role of Continuous Glucose Monitoring in Diabetes Treatment*. 2018.
Kruger DF, et al. *Diabetes Educ.* 2019;45:3S-20S.

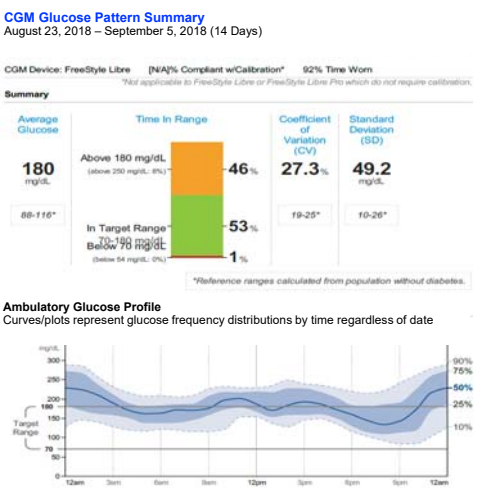
Data Interpretation

1. Determine whether data are adequate
2. Share data report with patient
3. Mark the page—identify meals, medications, activity, sleep, etc.
4. Look for patterns (lows and highs)
5. Develop action plan
6. Document in chart

28-year-old man, recently diagnosed, following very low carb eating plan, skips breakfast



Data Interpretation (cont.)



Also look at:

- Time in range
- Frequency of scanning
- Daily details (often highlight opportunities for lifestyle intervention, referral to diabetes educator)

When Would You Use Professional CGM?

- To obtain baseline data for a patient who is new to your practice
- When no self-monitoring of blood glucose data are available to review for a variety of reasons, such as lack of insurance coverage, supplies, ability, or desire to perform self-monitoring of blood glucose
- For individuals with chronically elevated glucose levels
- To help guide medication adjustment

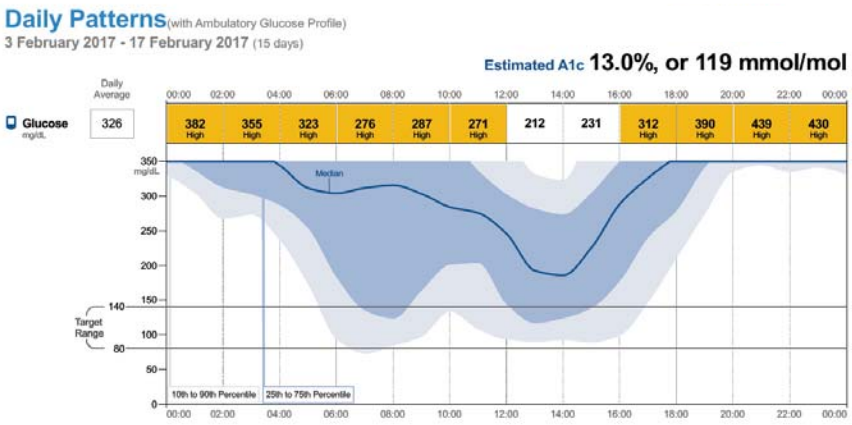
Danne T, et al. *Diabetes Care*. 2017;40:1631-40.

CASE STUDY
Tim

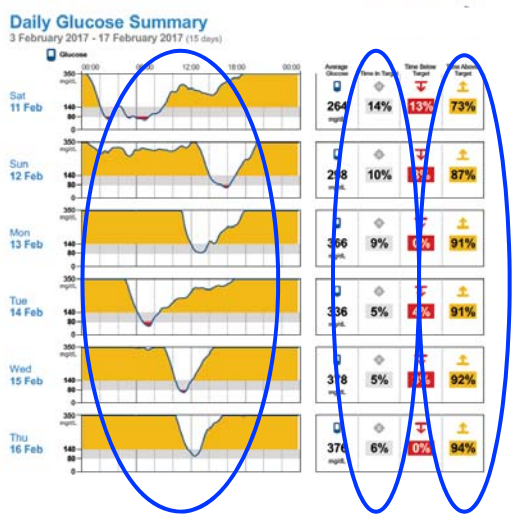
Professional CGM Glucose Profile and Daily Views

- Tim, a 47-year-old man with T1D and autism
  - BMI: 28 kg/m^2
  - Parents are in their 80s and are concerned about his safety/ability to live independently
  - Multiple daily injections: glargine 35 BID, lispro 20 units per meal
  - Rx: retrospective CGM to determine disconnect between HbA1c and glucose meter average
- HbA1c: 13%
- SMBG:
  - Average: 183 mg/dL
  - Standard deviation: 87
  - Frequency: < 1x/day

Tim's Daily Patterns



Tim's Daily Glucose Summary



Workflow in PCP's Office

1. Make sure that the office can download data from each device
2. Set up a download station at a central point in the office, where ancillary staff can do it before the visit
3. Ask each patient with diabetes whether s/he has a CGM device
   - Has the patient uploaded to the cloud so data just need to be retrieved?
   - If not, a staff member should take the device and download the data
4. In many cases, a paper printout will be generated; pick the reports needed in advance for each device
5. Confirm that the patient's name and device time range are correct
6. Determine how to attach the download to the patient visit

Kruger DF, et al. *Diabetes Educ*. 2019;45:3S-20S.

Insurance Coverage for Personal Devices

- **Commercial**
  - Most require completion of certificate of medical necessity
  - Typically requires chart notes from recent appointments and/or a finger-stick log
  - Depending on insurance, may be dispensed by durable medical equipment companies or directly shipped to the individual with T1D
  - Libre (reader and sensors) can typically be prescribed as a pharmacy benefit
- **Medicare**
  - Patient must be using multiple daily injections (4 or more) or insulin pump
  - Must have documentation of using a glucose meter or CGM to adjust insulin doses
  - Requires the completion of certificate of medical necessity and chart notes to document the above
  - Dispensed by durable medical equipment companies
- **Medicaid**
  - Coverage difficult at this time, may require prior authorization
  - Requires supporting documentation
  - Dispensed by durable medical equipment companies

Note: the process to obtain coverage varies based on the device type and the patient's insurance plan.
Kruger DF, et al. *Diabetes Educ.* 2019;45:3S-20S.

Insurance Coverage for Professional Devices

- Office needs to purchase the reader, sensors, and transmitters
- Billed through CPT codes

Kruger DF, et al. *Diabetes Educ.* 2019;45:3S-20S.

Billing for CGM Evaluation: CPT Codes 95249, 95250, and 95251

Code	Description	Who can place and initiate sensor	Who can bill for service	Medicare physician fee schedule	Medicare outpatient diabetes center	Private payer[a]
95249	Ambulatory initiation of CGM of interstitial tissue fluid via a subcutaneous sensor for a minimum of 72 hours; patient-owned equipment, sensor placement, hook-up, calibration of monitor, patient training, and printout of recording. The code requires the patient to bring the data receiver into the clinician office where the entire process is performed.	RN, PharmD/RPh, RD, CDE, or MA	Only MD/DO, NP, PA, and CNS	~$55	~$55	~$127
95250	Ambulatory CGM of interstitial tissue fluid via a subcutaneous sensor for a minimum of 72 hours; clinician-owned equipment, sensor placement, hook-up, calibration of monitor, patient training, removal of sensor, and printout of recording.	RN, PharmD/RPh, RD, CDE, or MA	Only MD/DO, NP, PA, and CNS	~$152	~$115	~$304
95251	This code is used and reported to insurers when clinicians perform an analysis, interpretation, and report on a minimum of 72 h of CGM data. The analysis, interpretation, and report may be done with data from patient-owned or clinician-owned CGM device. Importantly, the analysis, interpretation, and report are distinct from an E/M service and does not include an assessment of the patient or indicate a plan of care for the patient.	N/A	Only MD/DO, NP, PA, and CNS	~$36	Paid under physician fee schedule	~$96

[a]Estimated fees based on 2019 rates. CMS-1715-F Medicare Physician Fee Schedule Final Rule 2020. CMS-1717-FC; Medicare Outpatient Prospective Payment System Final Rule 2020. PMIC Medical Fees in the United States 2020. Table adapted from Kruger DF, et al. *Diabetes Educ.* 2019;45:3S-20S.

Documentation to Support CGM Evaluation in Patient Chart

1. Brief statement or narrative that glucose sensor data were evaluated
2. Treatment or therapy changes noted
3. Action steps, plan, or after-visit summary provided to patient
4. Electronic or printed data report attached to patient visit or chart

Expert opinion.

Practice Pearls: Actionable "Surprise" for All Users

- **Observations**
  - Need for medication advancement
  - Effect of food choices on postprandial glucose response
  - Effect of physical activity on insulin sensitivity
  - Self-care behavior opportunities
  - Improved quality of life for individuals with T1D

Expert opinion.

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