Session 3: Practical Aspects of Integrating CGM technology into the clinic

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Faculty Disclosure

Thomas Martens, faculty for this educational activity, has the following relevant financial relationships:

- Consultant, advisor, or speaker: Abbott, Dexcom, Lilly, Medtronic, Sanofi, MannKind
- Clinical Research: Abbott, Dexcom, Lilly, Medtronic, Novo Nordisk, Sanofi, Insulet, Tandem, Sequel, Luna, Zealand, Amgen

Financial management of all grants, honoraria and payments is by his employer, HealthPartners Institute dba International Diabetes Center; Dr. Martens does not received personal payments for these activities.

This talk at times will refer specific brands of devices. All attempts have been made to include equal coverage for commonly available devices. CGM devices have evolved to be very similar; no brand preference is either implied or stated.

Agenda

- CGM Data
- Overcoming technology barriers in clinic workflow
- Ordering and billing for CGM
- Common patient concerns with CGM use
- Cost Concerns with CGM

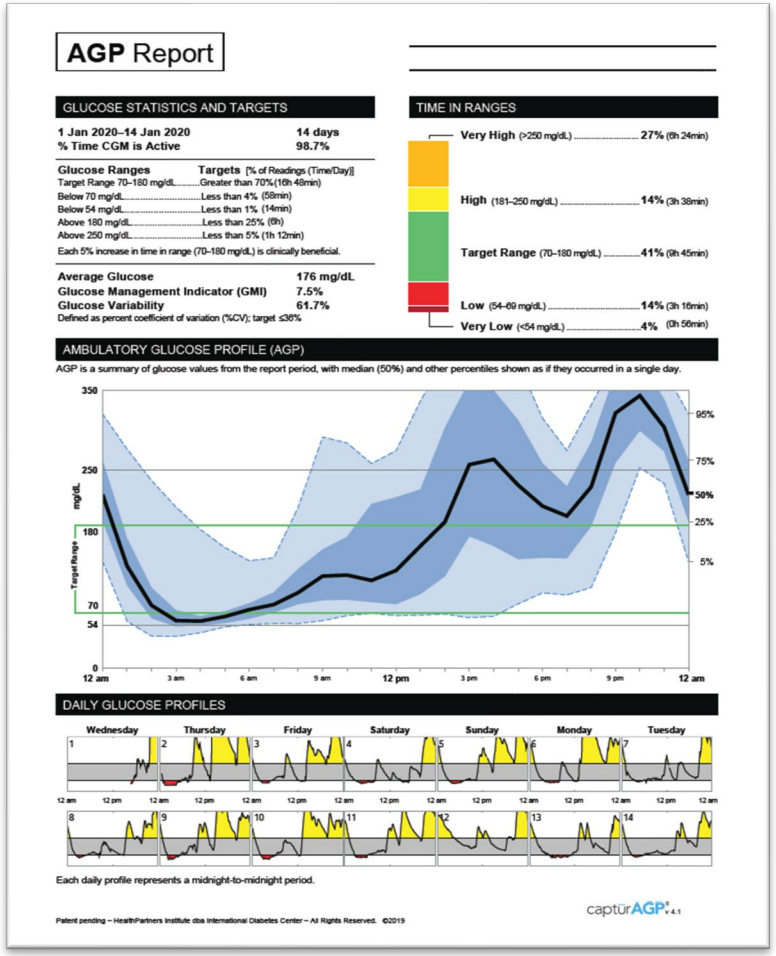
Real-time Data versus Retrospective Data

Point-in-time glucose reading

"Trend arrow": Is the glucose rising or falling?

Glucose trend line

Vs.



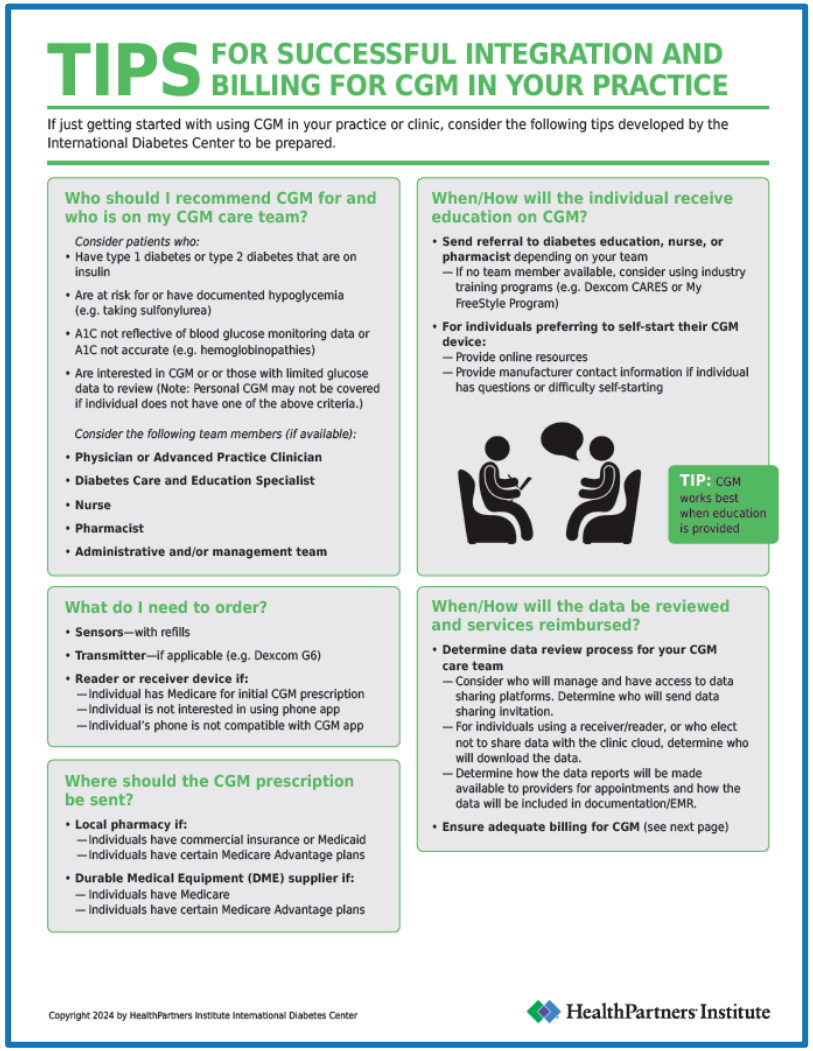
Point-In-Time and Real-Time Data

Workflows: Retrospective data only helps if it's available and you use it!

- **Cloud-based access via smartphone link: Best case scenario**
  - Retrospective data still needs to be retrieved for visits
- Downloading data from devices (readers) in clinic feasible- workflow process is helpful
- Pre-visit uploading of reader from home computer- cords, drivers, OS can be a problem
- Backup plan: Scroll through reader or device in clinic
- Who's going to retrieve the data?
- More important: who's going to help set up smartphone and cloud access- need a diabetes tech "champion"- CDCES or other? You personally?

CGM in Primary Care: Build your Team!

- Clinician
- "Diabetes technology champion": CDCES, RN, LPN, Pharmacist, other?
  - Obtain devices: Prior-authorizations, etc.
  - Help to set up an account for cloud-based access
  - CGM / device set-up
  - Obtain CGM data prior to visits
- Protocol-driven co-management to improve cycle time?



TIPS FOR SUCCESSFUL INTEGRATION AND BILLING FOR CGM IN YOUR PRACTICE

If just getting started with using CGM in your practice or clinic, consider the following tips developed by the International Diabetes Center to be prepared.

Who should I recommend CGM for and who is on my CGM care team?

Consider patients who:

- Have type 1 diabetes or type 2 diabetes that are on insulin
- Are at risk for or have documented hypoglycemia (e.g. taking sulfonylurea)
- A1C not reflective of blood glucose monitoring data or A1C not accurate (e.g. hemoglobinopathies)
- Are interested in CGM or or those with limited glucose data to review (Note: Personal CGM may not be covered if individual does not have one of the above criteria.)

Consider the following team members (if available):

- **Physician or Advanced Practice Clinician**
- **Diabetes Care and Education Specialist**
- **Nurse**
- **Pharmacist**
- **Administrative and/or management team**

When/How will the individual receive education on CGM?

- **Send referral to diabetes education, nurse, or pharmacist** depending on your team
  - If no team member available, consider using industry training programs (e.g. Dexcom CARES or My FreeStyle Program)
- **For individuals preferring to self-start their CGM device:**
  - Provide online resources
  - Provide manufacturer contact information if individual has questions or difficulty self-starting

TIP: CGM works best when education is provided

What do I need to order?

- **Sensors**—with refills
- **Transmitter**—if applicable (e.g. Dexcom G6)
- **Reader or receiver device if:**
  - Individual has Medicare for initial CGM prescription
  - Individual is not interested in using phone app
  - Individual's phone is not compatible with CGM app

Where should the CGM prescription be sent?

- **Local pharmacy if:**
  - Individuals have commercial insurance or Medicaid
  - Individuals have certain Medicare Advantage plans
- **Durable Medical Equipment (DME) supplier if:**
  - Individuals have Medicare
  - Individuals have certain Medicare Advantage plans

When/How will the data be reviewed and services reimbursed?

- **Determine data review process for your CGM care team**
  - Consider who will manage and have access to data sharing platforms. Determine who will send data sharing invitation.
  - For individuals using a receiver/reader, or who elect not to share data with the clinic cloud, determine who will download the data.
  - Determine how the data reports will be made available to providers for appointments and how the data will be included in documentation/EMR.
- **Ensure adequate billing for CGM** (see next page)

HealthPartners Institute

How to Get Cloud-Based Data

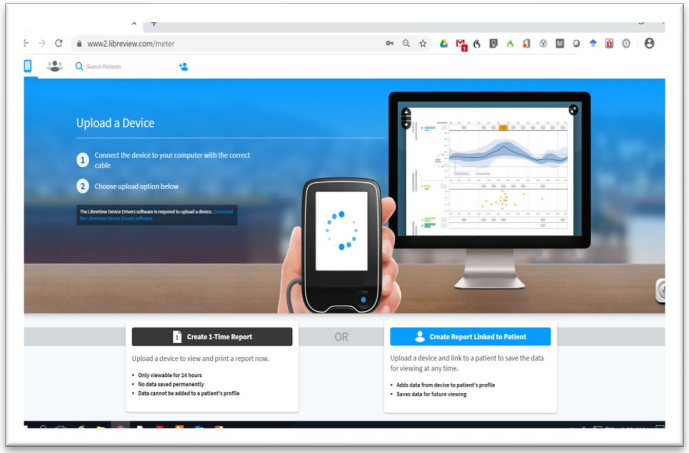
Abbott Freestyle Libre or Dexcom

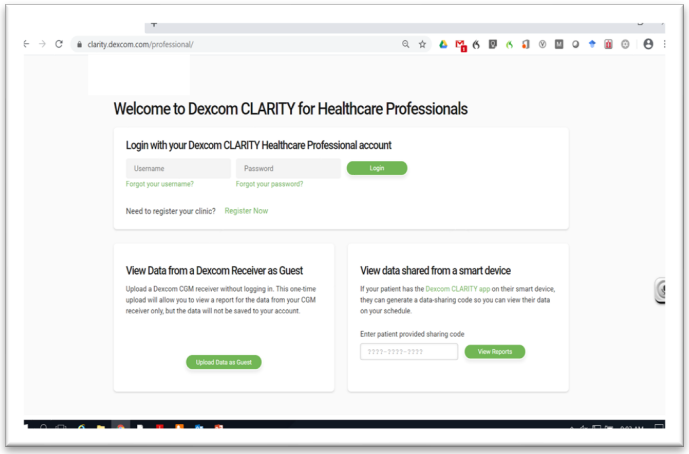
Individuals create a **Libreview app** account or **Dexcom G7 or Clarity** account

- From a Smartphone- flows directly to cloud

Clinics/ Clinicians create a **Libreview** and/or **Dexcom Clarity** Clinic portal

- Libreview or Clarity: enter clinic sharing code into app
- Linked account: access by individual name
- From reader or receiver: Micro-USB cord: Either create one-time report or link report to individual
- Local reps can be very helpful to get started



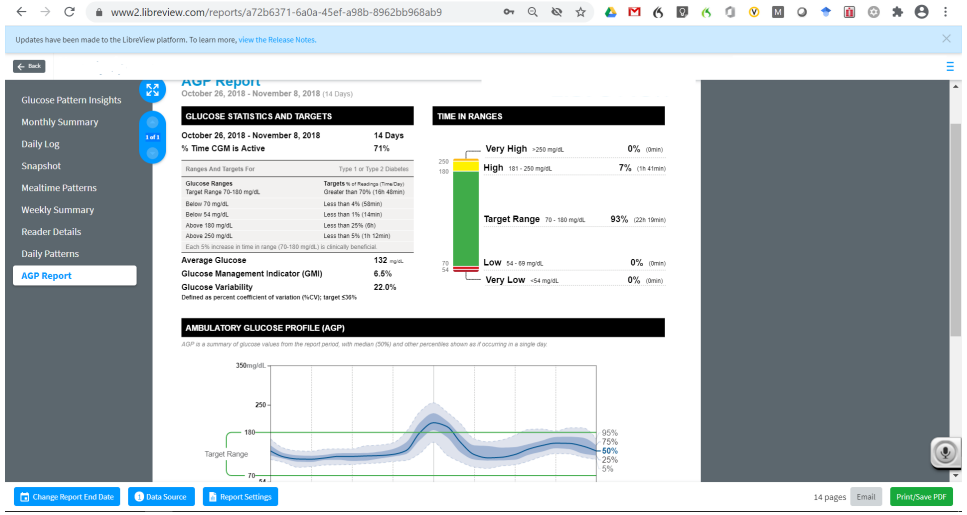


Other options:

- Medtronic Carelink (device specific)
- Eversense Diabetes Management System (DMS)

Cloud Data: What's Viewable

Cloud-based data typically available (in proprietary view, dependent on manufacturer) as:



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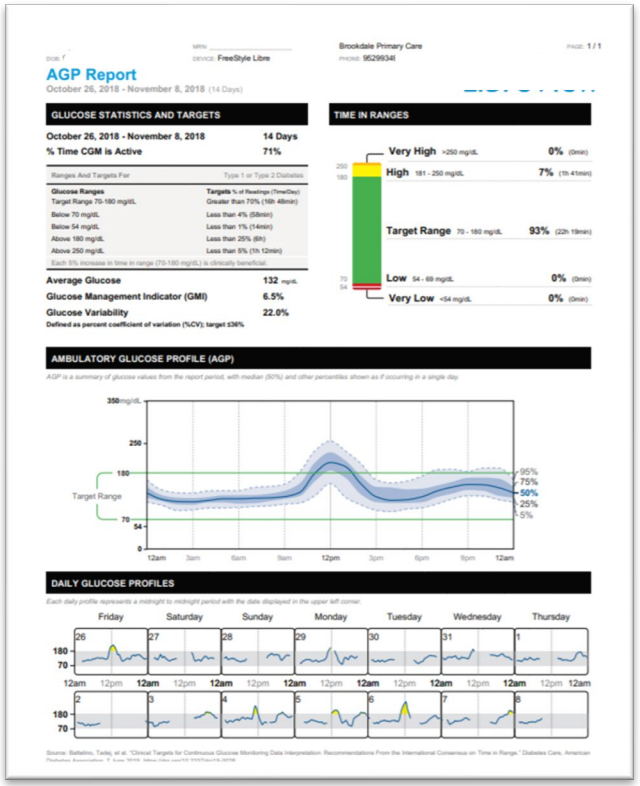
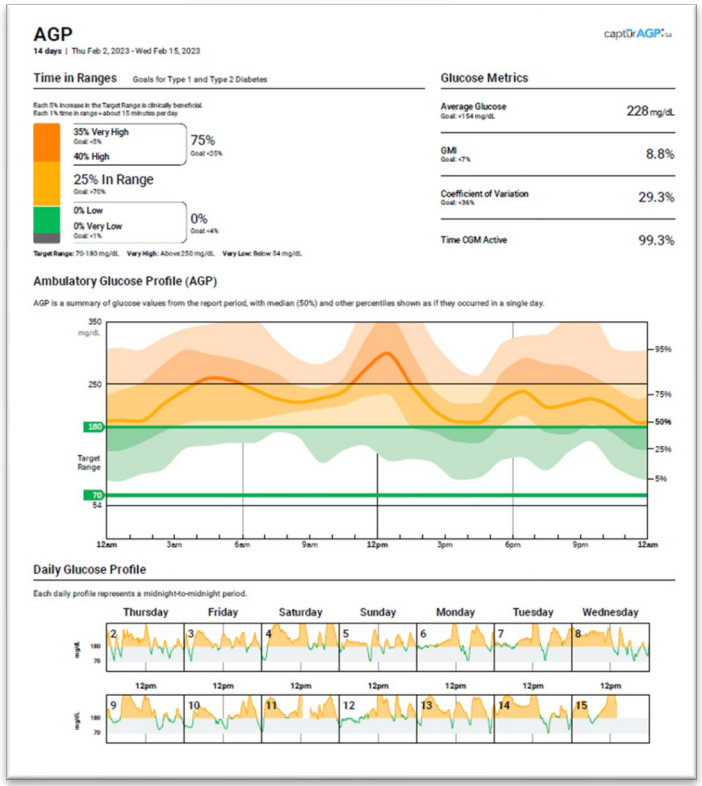




PDF

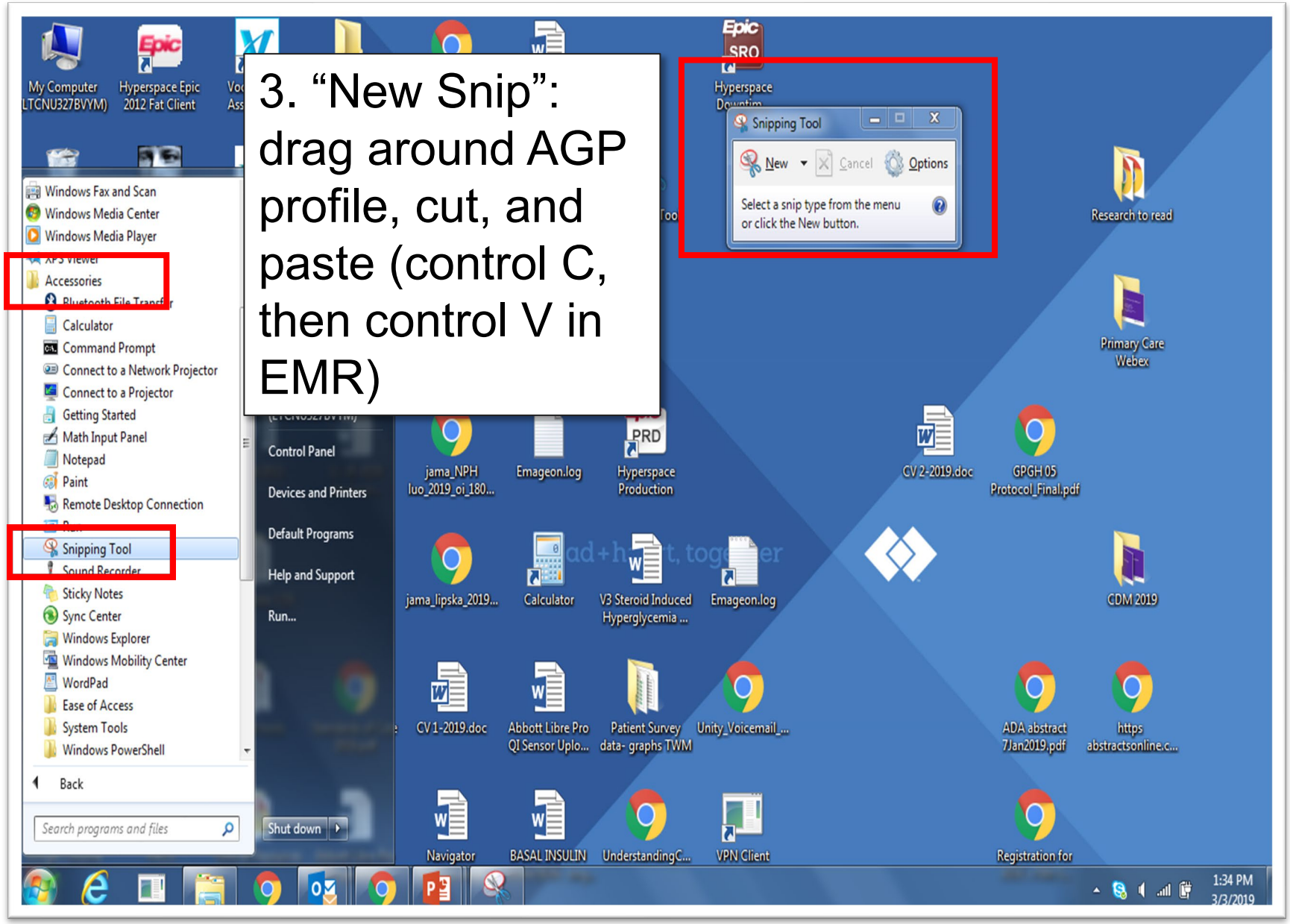
What's not yet available: A view in the EMR, or an easy importation process into the EMR

Cut and Paste Made Easy

"Snipping Tool"

1. Accessories in Windows Menu

2. Snipping Tool



- BROOK INTERNAL MEDICIN - LP0186/EPICPRD-1180-ECP08/APP1 - THOMAS M.

Patient Lists | Home | In Basket | Chart | Notes Orders | Schedule | ED Track Board | Appts | View Schedules | FixIT | Print | Chg Dept | Log Out

EpicCare THOMAS M. | Search

Pref Name: None | HP MRN: | PN MRN: | CSN: None | Age, DOB: | Gender: Female | Allergies: Penicillins, Pr... | Wt: | HM: H... | FYIs: N... | Code St... Prior | Adv Dir: On File | Infection: None | PCP: Me | Insurance: UC... | MyChart: Ac... | Interpreter?:... | HRC Gap: Yes

Chart Review

SnapShot | Chart Review | Care Everywh... | Adv Care Plan... | Review Flows... | Results Review | Synopsis | History | Allergies | Problem List | Medications | Imm/Inj/Meds | Demographics | Letters | PN Muse | Customize | More

Encounters | Notes | Labs | Micro/ID | Imaging | Cardio | Procedures | Anesthesia | Other Orders | Medications | LDAs

Text Search | Select All | Deselect All | Review Selected | Flowsheet | Load Remaining | Preview | Route | Refresh (11:18 AM) | About This Tab | Add to Bookmarks

Filters | Exclude | Internal Medicine | Brookdale Internal M... | DC Sum | IDC | More

To save time not all records have been loaded and sorted. Load All Records Now | Hide

Date of Service | Note Type | Encounter Type | Auth spec | Department

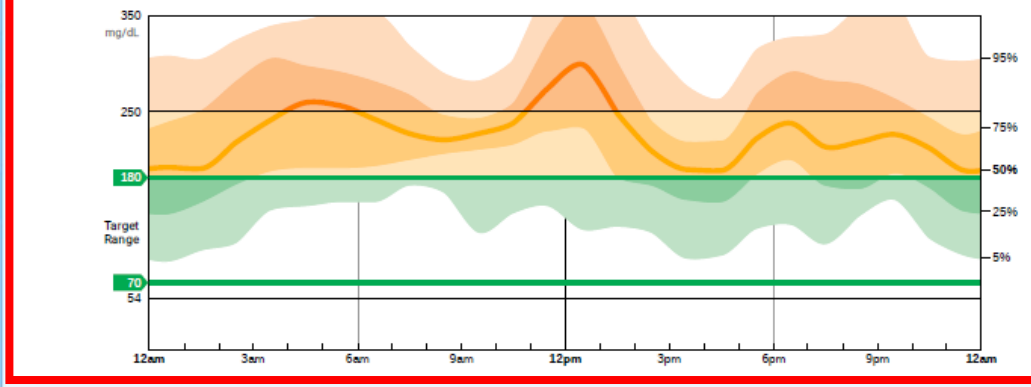
she was high. We discussed her hypoglycemia. They were not really in favor of further reducing her b
130 or less than the arrow is pointed down she needs a snack. She has Diabetes Education follow-up
spikes but we did not address that.

the "type 2 basics" book with him and had a number of questions from that. We addressed
appropriate here, to avoid hypoglycemia. With advanced age, history of stroke I thing modified goals a

before bed and if s
s getting some mealtime
which would be

Ambulatory Glucose Profile (AGP)

AGP is a summary of glucose values from the report period, with median (50%) and other percentiles shown as if they occurred in a single day.



AGP

14 days | Thu Feb 2, 2023 - Wed Feb 15, 2023

Time in Ranges Goals for Type 1 and Type 2 Diabetes

Each 5% increase in the Target Range is clinically beneficial.
Each 1% time in range = about 15 minutes per day

35% Very High Goal: <5%
40% High
75% Goal: >25%
25% In Range Goal: >70%
0% Low
0% Very Low Goal: <1%
0% Goal: <4%

Target Range: 70-180 mg/dL Very High: Above 250 mg/dL Very Low: Below 54 mg/dL

Glucose Metrics

Average Glucose Goal: <154 mg/dL	228 mg/dL
GMI Goal: <7%	8.8%
Coefficient of Variation Goal: <36%	29.3%
Time CGM Active	99.3%

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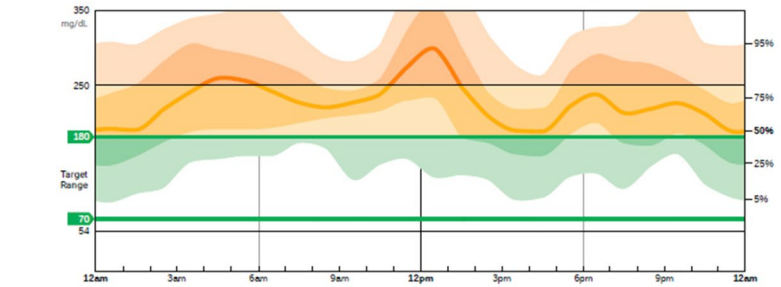
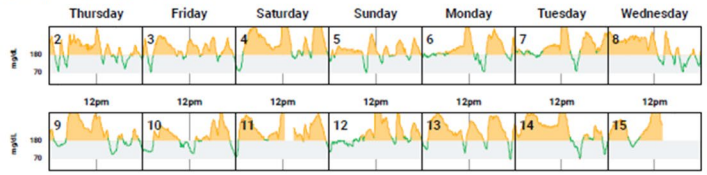
AGP is a summary of glucose values from the report period, with median (50%) and other percentiles shown as if they occurred in a single day.



Daily Glucose Profile

Each daily profile represents a midnight-to-midnight period.



11:18 AM

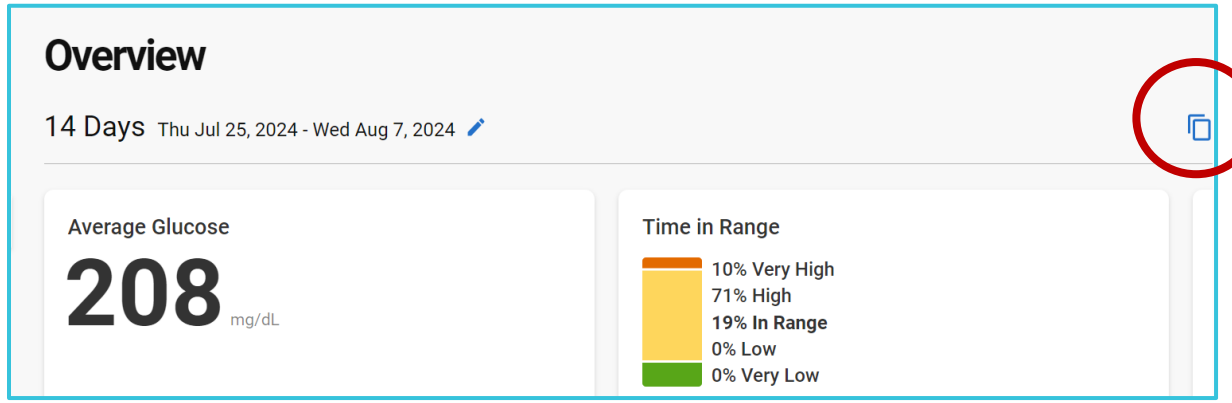
What if you cannot “snip” on your clinic computer?

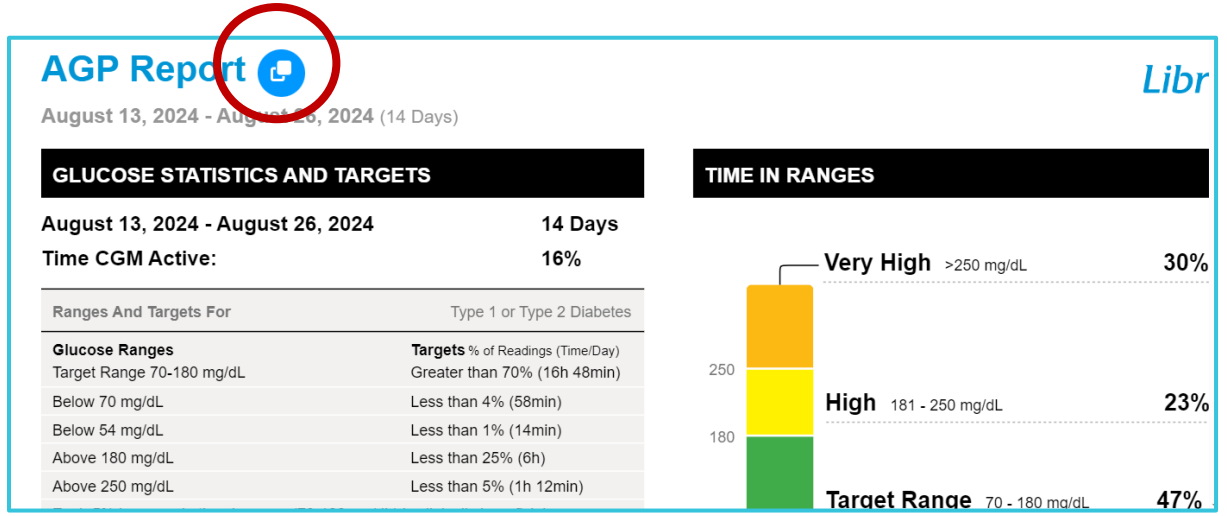
Dexcom Clarity

- Interactive reports > Overview > copy as text > paste into note

LibreView

- Glucose reports > AGP Report > copy as text > paste into note





- ❖ Does **NOT** copy images
- ❖ **Does** copy all the text needed for billing for CGM interpretation (95251 code)

CGM Metrics via Smartphone

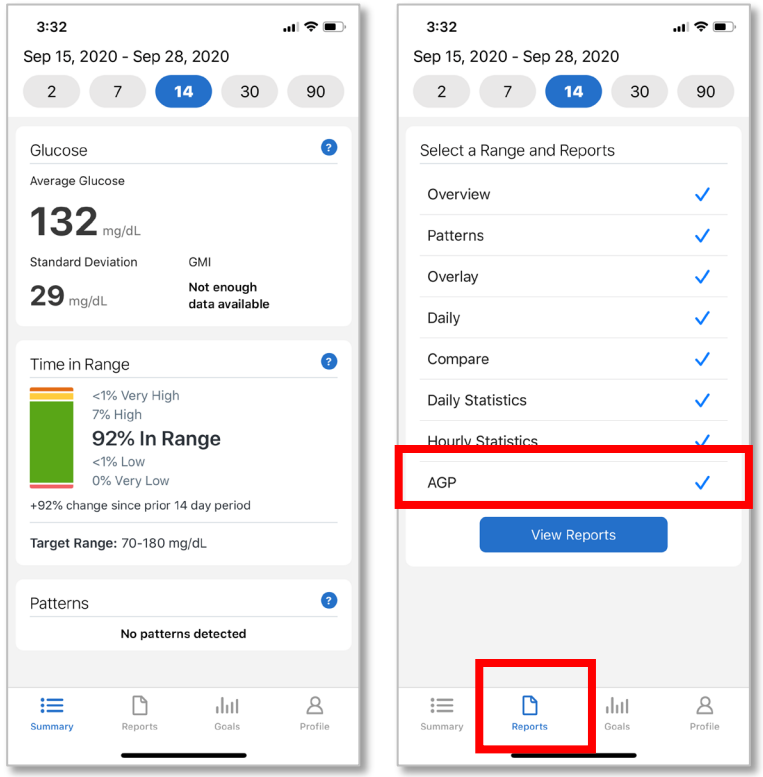
Dexcom Clarity:

- Go to the Dexcom Clarity app > Summary
  - Time frames: 2-day, 7-day,14-day
  - Time in ranges
  - To generate an AGP Report, tap reports > AGP Report (can email report)

Freestyle Libre:

- Go to the Libre app Main Menu icon > scroll down to Reports
  - TIR, daily graphs, etc

Freestyle Libre



Dexcom Clarity

CPT Codes for Personal CGM (Clinician)

- 95249 - CGM patient provided equipment (Personal CGM), sensor placement, hook-up, calibration of monitor, patient training, and printout
  - One-time code for initial start-up and education, only if applicable

- 95250 - CGM HCP (office) provided equipment (Professional CGM), sensor placement, hook-up, calibration of monitor, patient training, removal of sensor, and printout
  - This billing code covers the cost of sensors and placement by clinician/staff

+

- **95251 - CGM analysis, interpretation and report by clinician (physician or APC)**
  - **Can be billed monthly on ongoing basis**

  - All codes require a minimum of 72 hours of data
  - Use -25 modifier for CGM codes if billing same day as a Problem Visit code (99212-99215) if significant and separately identifiable service took place
    - 99212-99215: Pre-CGM evaluation (+) -25 95249: CGM start-up and instruction
    - 99212-99215: E and M code (+) -25 95251: CGM analysis, interpretation and report

CPT code 95251 Documentation:

Requires:

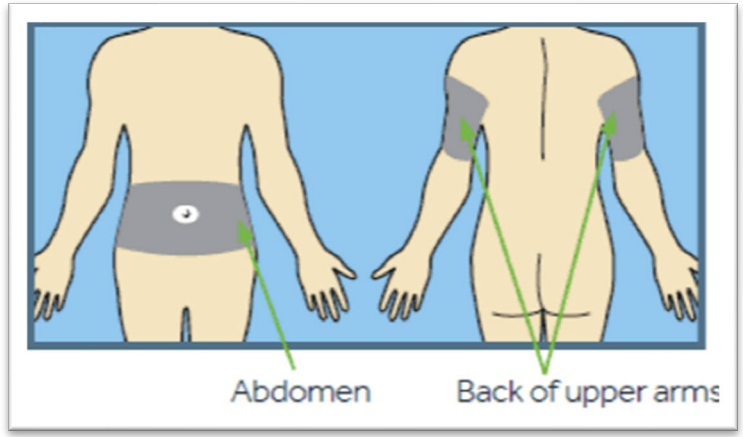
- At least 72 hours of data
- Can be billed no more often than every 30 days
- “analysis, interpretation, and report”

Document CGM metrics (ideally AGP profile image) and interpretation

- Ideally snipped AGP into chart note as it includes date range, metrics, and the profile
- At a minimum, glucose metrics from cloud or manually entered
- Can be entered as a -25 modifier in addition to an evaluation and management (E/M) code
- Around 1.02 RVUs: Helps to support workflow/time spent in data retrieval

Practical Aspects of Using CGM

- **Limited MRI/CT XRAYs with CGM devices** (See manufacturer recommendations on their specific CGM)
  - Metal detectors are okay
- **No number, no arrow, no treatment decision**
  - When in doubt, get your meter out
  - All CGM devices are less accurate in the hypoglycemia range
- **Interfering substances**
  - >500 mg Ascorbic Acid – Libre
  - Hydroxyurea – Dexcom G6 and G7, Medtronic
  - Acetaminophen – Medtronic (Dexcom if higher than the max dose)
  - Alcohol – Medtronic
- **Approved locations for placement:**
  - Libre – back of upper arm
  - Dexcom G6 – abdomen (adults)
  - Dexcom G7 and Stelo – back of upper arm
  - Medtronic – Abdomen or back of upper arm
- **Sharing data remotely?** Need to have a smart device with app or download at home
- **Approved for pregnancy – Dexcom G6, Dexcom G7, Libre 2+, Libre 3+**
- **Cost of devices can vary significantly depending on manufacturer and insurance coverage**



CGM and skin

Adhesion: Review Proper CGM Insertion Steps

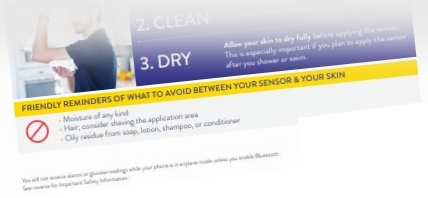
- Provide insertion resources from the manufa
- Clean s
  - Avo
  - Alc
- If using product sensor
- After a apply li
- Apply r Dexcom G7 or if needed

Application tip:

Sensors are most prone to adhesion problems in the first 30-60 minutes after insertion

- Medical adhesives are typically **pressure-sensitive** and **temperature-reactive** (adhere best when slightly warmed by body heat and pressed into full contact with the skin)
- Applying gentle pressure helps activate the adhesive's bonding process

Gentle pressure helps remove air pockets, improves bonding strength, and reduces early lifting or failure



Images from Dexcom G7 Start Here Guide and Freestyle Libre Application Guide

Additional Sensor Adhesion Tips: Sticky stuff and overlays

- Adhesive prep wipes or liquids (***sticky stuff***) can be helpful (many brands available)
- Avoid use of lotion where sensor will be placed
- Water softener in the home? Use 1-2 alcohol wipes to remove any residue before applying the sensor
- Consider overpatch (***overlay***) to help hold sensor in place
- Wait at least 2 hours after application before getting the sensor wet
- Pat dry with a towel after bathing or swimming to avoid catching or tugging at the sensor

Tips to decrease skin irritation

Site preparation reminders to minimize irritation:

- Rotate sites & side of body when applying a new sensor
- Avoid cuts, rashes and broken skin
- Shave or clip hair to allow a smooth surface

Products to reduce skin irritation:

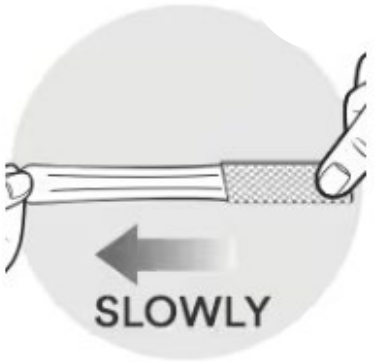
- Barrier wipes or sprays applied prior to insertion are helpful for some
- Physical barrier (e.g. film/hydrocolloid) applied prior to insertion (Cut a hole for inserter needle to easily pass through)
- Fluticasone nasal spray prior to insertion as a last resort (*off-label*, risk for skin atrophy with long-term use)
- Hydrocortisone cream applied to irritated skin *after* sensor removal

If irritation is related to an adhesive allergy, try changing CGM sensor brands

Consider implantable sensor?

Too Sticky!

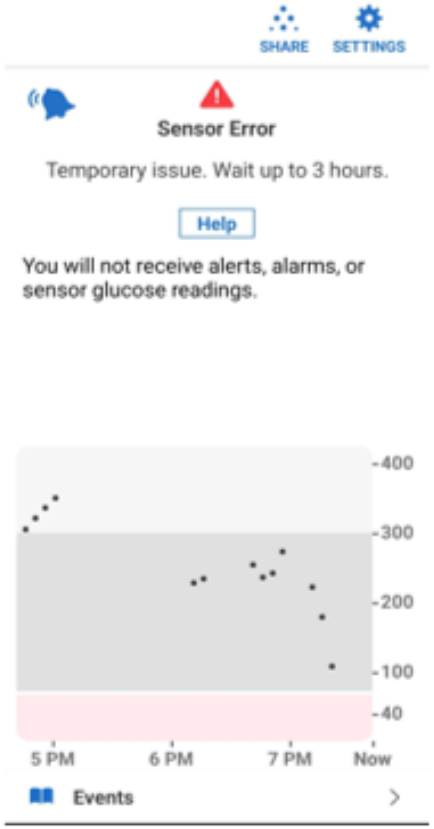
- Soak with warm water
- Barrier films
- Adhesive removers: TacAway, Detachol wipes, Unisolve
- Oil based products: baby oil, coconut oil, olive oil
- Different removal techniques:
  - Stretch-and-peel method- **Stretch outward.** Instead of pulling the patch up, stretch the adhesive outward, parallel to the skin's surface.
  - Peel back method
- Gentle removal – avoid mechanical tearing or skin stripping



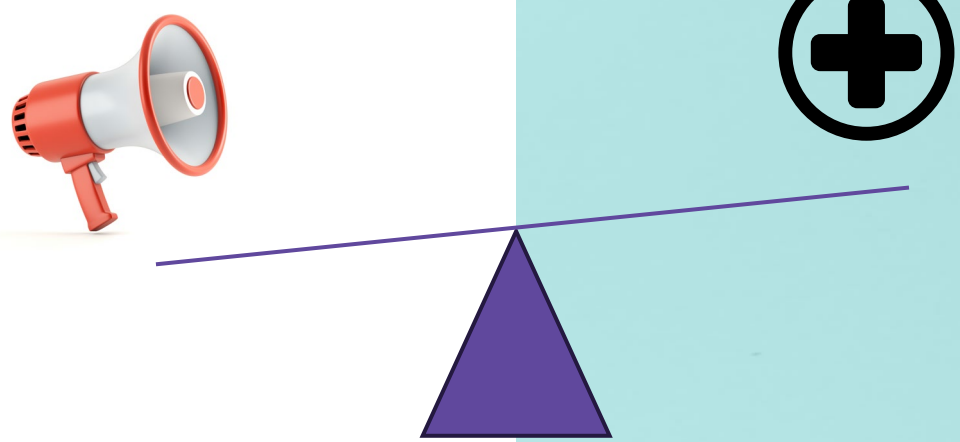
Panther Program. (2025, October). *Device Comparison Chart using the C|A|R|E|S Framework* [PDF]. Barbara Davis Center for Diabetes. Retrieved from https://www.pantherprogram.org/_files/ugd/29eb34_046288455eae40d9b88562d6c8404ba4.pdf

Other Challenges with CGM Sensors

- Remember time lag with sensor readings
- Issues that may impact sensor data and accuracy
  - Compression lows
  - Hydration
  - Signal loss
- When should you verify sensor values with a fingerstick glucose check?

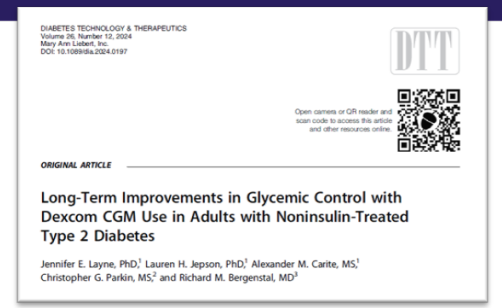


Alerts & Alarms: to help or hinder?

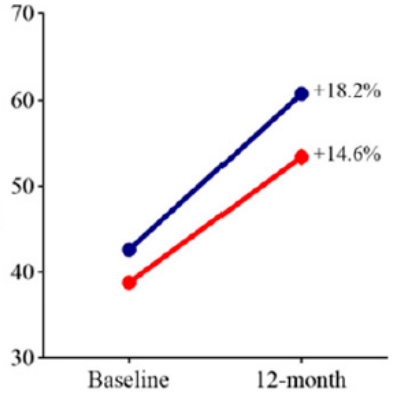


Improved outcomes versus increased frustration?

Observational data: T2D-NIT Alerts make a difference

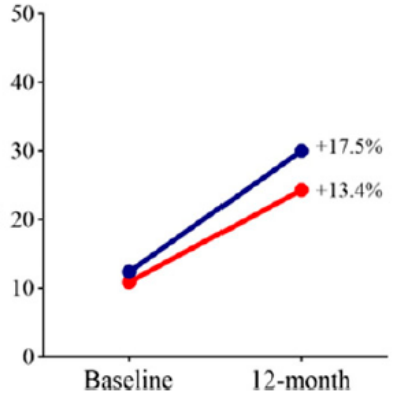


TIR 70-180 mg/dL (%)



High Alert Setting
- Enabled
- Disabled

TITR 70-140 mg/dL (%)



High Alert Setting
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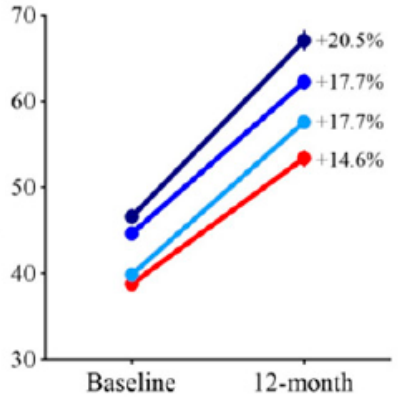
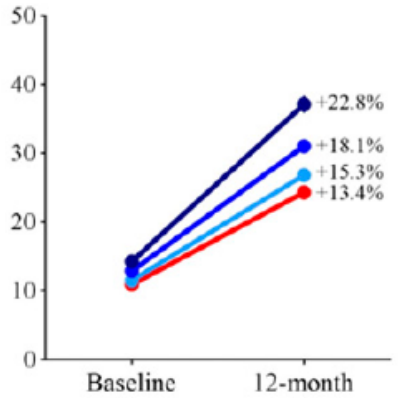


High Alert Setting
- Lowered <250mg/dL
- Default 250 mg/dL
- Raised >250 mg/dL
- Disabled

TITR 70-140 mg/dL (%)



High Alert Setting
- Lowered <250mg/dL
- Default 250 mg/dL
- Raised >250 mg/dL
- Disabled

Layne JE, Jepson LH, Carite AM, Parkin CG, Bergenstal RM. Long-Term Improvements in Glycemic Control with Dexcom CGM Use in Adults with Noninsulin-Treated Type 2 Diabetes. *Diabetes Technol Ther*. 2024;26(12):925-931.

Alert fatigue: The other side of the equation

CGM Alert burden:

- Burnout
- Disrupted sleep
- Psychological distress
- Socially disruptive
- Data overload

Often = Abandonment of CGM

Some thoughts on alerts:

- Hypoglycemia alerts improve safety
- Hyperglycemia alerts are helpful for some but very disruptive for others
- Consider individualizing based on patient-specific factors

Some Thoughts About Introducing Technology-Naïve Individuals to Technology . . .

Worth spending extra time to make sure devices are being used correctly

- Start with setting device for correct time and language (if reader)
- Discuss sensor placement and adhesion/retention
- Provide education regarding pattern-based management beyond simply "checking a glucose" (Think CDCES!)

Don't assume any familiarity with "connected" technology

- May need help connecting to "cloud" if using Smartphone-based
- Provide a clinic connection code up-front
- Smartphone compatibility (or access) issues limit connectivity for some
- If unable to connect, review data on the device together in clinic!

Cost Concerns with CGM

- Manufacturers of CGM may offer cost-assistance options for eligible patients
- Patients can be advised to contact the CGM device manufacturer's customer service or saving centers for details.
- Patients can check out healthcare platform that provides prescription drug discounts and telehealth services
- Over-the-counter systems?

Over the Counter CGM/Biosensor Systems

Abbott Lingo:

- 14 day biosensor. Readings taken every minute
- No stand-alone reader/receiver, requires the Lingo app
- No low glucose alerts
- Glucose range 55 to 200 mg/dL
- Doesn't track in Libreview

Dexcom Stelo:

- 15 day biosensor. Readings taken every 15 minutes
- No stand-alone reader/receiver, requires the Stelo app
- No low glucose alerts
- Glucose range 70 and 250 mg/dL
- DOES track in Dexcom Clarity

Session 3: Practical Aspects of Integrating CGM technology into the clinic

Thank you!

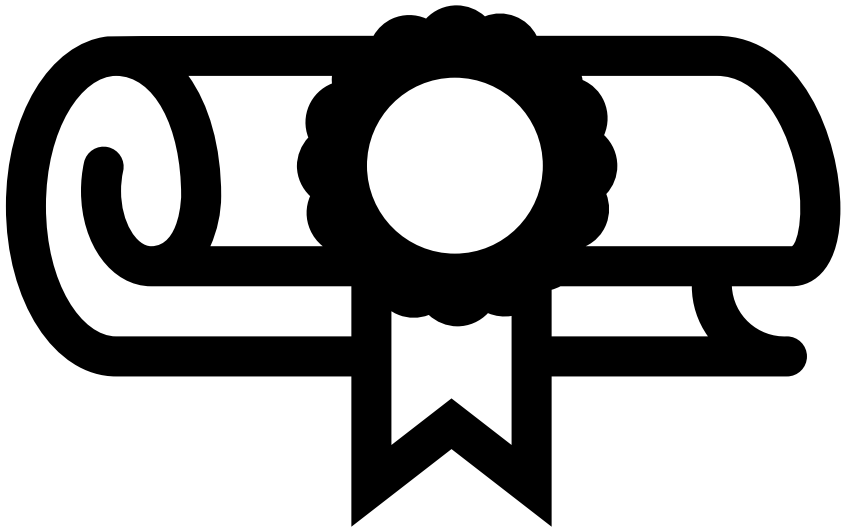
Thomas Martens, MD
International Diabetes Center
Internal Medicine- Park Nicollet Clinic

HealthPartners® Institute

Instructions for Credit – Live Learners

To receive CE credit, learners must follow these steps:

- Visit https://cme.partnersed.com/IDC.BSW.live Complete the activity evaluation
- Upon completion of all evaluation questions, your credit will be made available for download immediately.



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