

# Diabetes Technology: Focused on Type 2 Diabetes

**56<sup>th</sup> Annual Primary Care Conference OHSU**

Rita M. Parsiani, PharmD, BC-ADM, CDCES  
Clinical Pharmacist, Harold Schnitzer Diabetes Health Center  
parsiani@ohsu.edu  
Feb 2025



# Learning Objectives

- Identify the role of continuous glucose monitoring (CGM) devices in improving glycemic control and enhancing diabetes care
- Incorporate appropriate treatment plans for patients with diabetes based on CGM reports
- Be able to recognize and recommend diabetes technology for select patients with type 2 diabetes

# We've come a long a way...



Ames Urine Glucose 1940's



Ames DextroStix 1960's



Ames Glucose Meter 1970's



Cygnus GlucoWatch 2001



Dexcom STS 3-day CGM

## Modern-Day Personal-Use CGM 2017

American Diabetes Association recommends the following resources guide: <https://consumerguide.diabetes.org/>



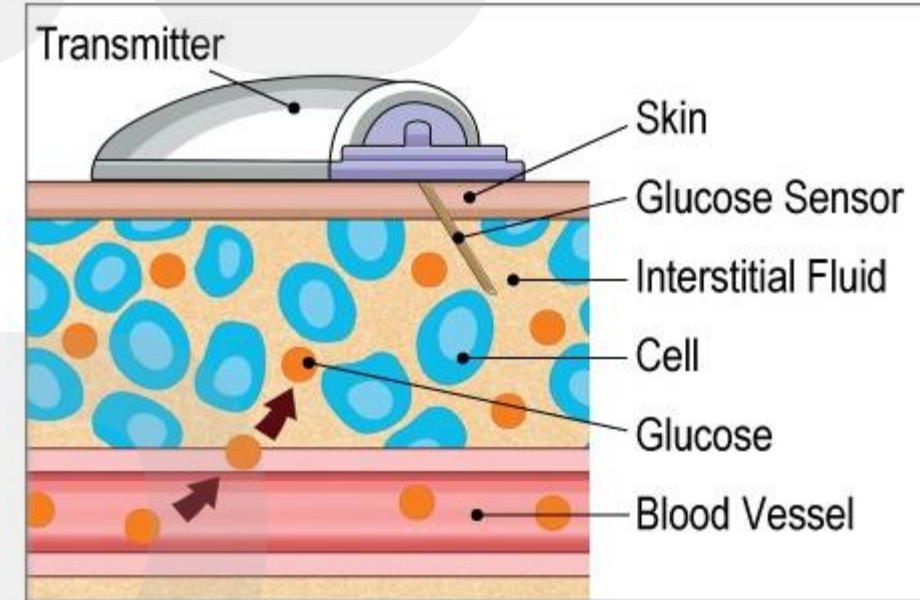
- Freestyle Libre (2017)
- Dexcom G6 (2018)
- Libre 2 (2020)
- Eversense E3 (2022)
- Dexcom G7 (2023)
- Medtronic Guardian 4 (2023)

- Libre 2 Plus (2024)
- Libre 3 (2024)
- Libre 3 Plus (2024)
- Dexcom Stelo (2024)
- Eversense 265 (2024)
- Lingo (2024)
- Rio (2024)
- More to come!



# How does CGM work?

- CGM consists of three components: a sensor, transmitter, and receiver (or smartphone).
- Typically inserted on the back or the arm or abdomen
- Measures glucose every 1-5 mins and records it every 5-15 mins (up to 288 readings/day)
- Lag time for CGM glucose measurements when compared to glucose measured in the capillary through a traditional glucose meter.
  - More apparent at times when glucose is rapidly rising or falling and, with the lag time typically ranging from 5 to 15 minutes.
- Mean Absolute Relative Deficiency (MARD) is a term used to describe CGM accuracy compared to laboratory blood glucose values.
  - The lower the MARD, the more accurate. Device accuracy has greatly improved in recent years.



# CGM Accuracy (MARD)

- MARD is the average difference between a sensor value and a laboratory value
  - Example: CGM value of 120 and a lab value of 150, there's a 20% difference. If the CGM value is 90 and the lab value is 80, there's a 12% difference. If you take thousands of these values and average the percentage difference, you get the MARD of the device.
- MARD for most CGMs within 8-11%
  - Note: CGM values are not being compared to meter or fingerstick values to determine the MARD. They're compared to laboratory value.
- MARD for the latest CGM:
  - Libre 3: 7.9% & Libre 2: 9.2%
  - Guardian 3 (2-4 calibrations/day): 8.7%-9.1% & Guardian 4 (no calibrations): 10.6%
  - Dexcom G7: 8.2% & Dexcom G6: 9.0%
  - Eversense E3: 8.5%
  - Glucose meters: 5-15%

# Glycemic Benefits of CGM

- Positive impact on disease burden & Quality of Life
- Increased time in range (TIR)
- Reduced A1C (use of the device alone can drive reduction)
- Reduced hospitalizations resulting from a reduction in acute diabetes events (e.g., diabetes ketoacidosis and severe hypoglycemia)
- Reduced time in hypoglycemia, particularly overnight
- Reduced work absenteeism
- Convenience and comfort (less pain, less hassle, fewer fingersticks)

# Glycemic Benefits Continued

- Initial studies primarily in adults and youth with type 1 diabetes on insulin pump or MDI
- Significant reductions in hospitalizations for acute diabetes-related events
- RCT data for rtCGM use in individuals with type 2 diabetes on MDI, mixed therapies, and basal insulin have consistently shown reductions in A1C levels and increases in TIR
  - DiaMonD, GOLD & SILVER trials found 1.4% A1C reduction in individuals with type 2 diabetes with elevated A1Cs, 80% decrease in severe hypoglycemia, sustained quality-of-life outcomes at 2.5 years
  - WISDOM & DiaMonD trials: 0.9% A1C reduction in both type 1 and type 2 diabetes, rapid decrease in time <70 mg/dL, TIR increased by 2.1 hrs/day, high level of treatment satisfaction
  - MOBILE Study T2: CGM use led to significant A1c reductions when compared to BGM, TIR increased 40% to 59% and time spent >250 mg/dL was greatly reduced.
- CGM discontinuation in individuals with type 2 diabetes on basal insulin caused partial reversal of A1C reduction and TIR improvements, suggesting that continued CGM has the greatest benefits

# Professional Society Recommendations

- ADA Standards of Care: 2025 Updates
  - Recommend CGM to youth and adults with diabetes on any type of insulin therapy (Grade A).
  - Consider using CGM in adults with type 2 diabetes treated with glucose-lowering medications other than insulin to achieve and maintain individualized glycemic goals (Grade B).
  - In people with diabetes on insulin therapy, CGM devices should be used as close to daily as possible for maximal benefit (Grade A)
  - People with diabetes should have uninterrupted access to their supplies to minimize gaps in CGM (Grade A).

## 7. Diabetes Technology: Standards of Care in Diabetes—2025

American Diabetes Association  
Professional Practice Committee\*

*Diabetes Care* 2025;48(Suppl. 1):S146–S166 | <https://doi.org/10.2337/dc25-S007>

January 2025



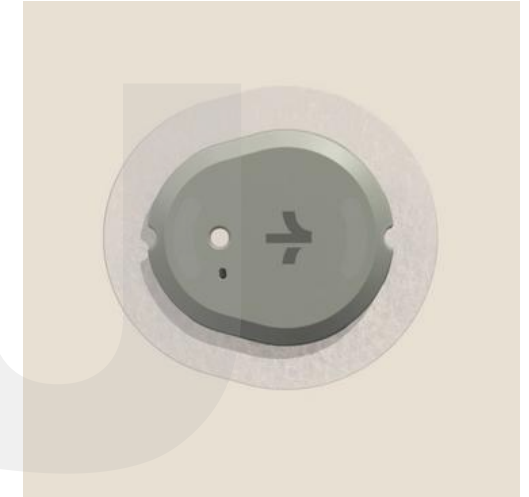


# Currently Available CGMs

Device	Approved Age	Approved Insertion Site	MARD*	Sensor Life-time	Warm-Up Time	Calibration required?	Data availability	Alerts / Alarms
<b>Abbott FreeStyle Libre 14 day</b>	≥18 years	Back of upper arm	9.4%	14 days	1 hour	No	Scan	No
<b>Abbott FreeStyle Libre 2</b>	≥4 years	Back of upper arm	9.3%	14 days	1 hour	No	Scan	Yes
<b>Abbott FreeStyle Libre 2 Plus</b>	≥2 years	Back of upper arm	8.2%	15 days	1 hour	No	Real-time	Yes
<b>Abbott FreeStyle Libre 3 (expected d/c 9/2025)</b>	≥4 years	Back of upper arm	8.9%	14 days	1 hour	No	Real-time	Yes
<b>Abbott Freestyle Libre 3 Plus</b>	≥2 years	Back of upper arm	8.2%	15 days	1 hour	No	Real-time	Yes
<b>Dexcom G6</b>	≥2 years	Abdomen (upper buttocks for age 2-6)	9.0%	10 days	2 hours	No	Real-time	Yes
<b>Dexcom G7</b>	≥2 years	Back of upper arm (upper buttocks for age 2-6)	8.2%	10 days	30 minutes	No	Real-time	Yes
<b>Medtronic Guardian Connect</b>	14-75 years	Abdomen or back of upper arm	10.55% (abdomen) / 9.09% (arm)	7 days	2 hours	Yes	Real-time	Yes
<b>Senseonics Eversense E3</b>	≥18 years	Back of upper arm	8.5%	180 days	24 hours	Yes	Real-time	Yes

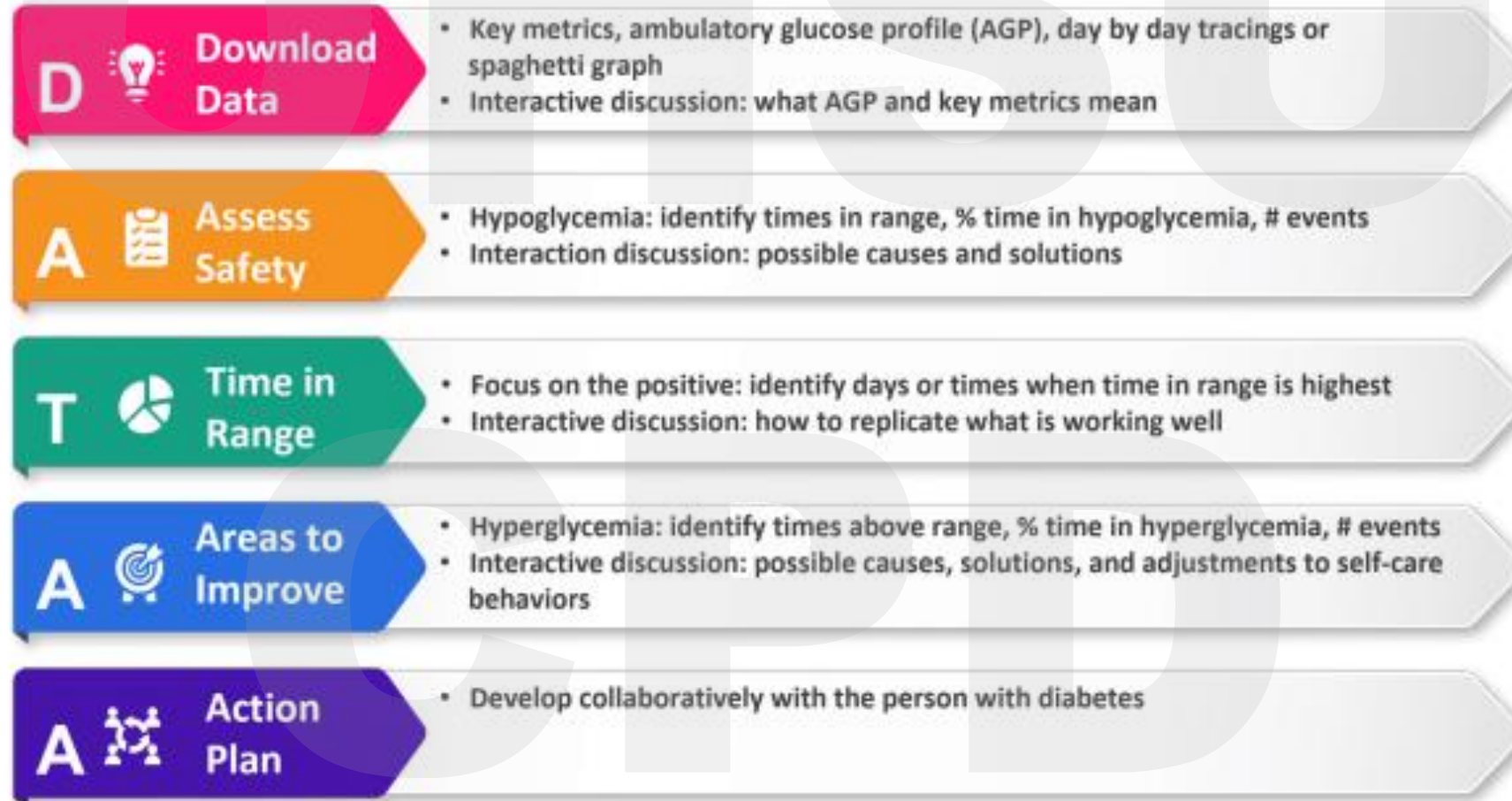
# Over the counter available

Device	Approved Age	Approved Insertion Site	MARD*	Sensor Life-time	Warm-Up Time	Range	Indications	Alerts / Alarms
<b>Dexcom Stelo</b>	≥18 years	Back of upper arm	8.3%	15 days	30 minutes	70-250 mg/dL	Type 2 DM (not on insulin)	No
<b>Libre Rio (coming soon!)</b>	≥18 years	Back of upper arm	Not reported	15 days	1 hour	40-400 mg/dL	Type 2 DM (not on insulin) & preDM	No
<b>Libre Lingo</b>	≥18 years	Back of upper arm	Not reported	14 days	1 hour	50-200 mg/dL	General health and wellness	No



# Review of CGM Data

DATAA approach is a systematic 5-step approach to analyzing CGM data.



**\*\*\*At each step, express that this is information, not good or bad\*\*\***

# DATAA Interpretation Pointers

- Start by asking the person what they've experienced or noticed with their glucose.
- Avoid any kind of judgment
- While one-off events can provide learning opportunities, you will get more bang for your buck by focusing on patterns.
- Fix the lows first, but some amount is expected (<1-4%).
- Focus on the greatest contributors to time in range, such as food, medications, activity, and stress.
- If patterns don't make sense, dig deeper.



# Beyond A1C Targets for Different Populations

GMI calculated for various CGM-derived mean glucose concentrations

100	5.7
125	6.3
150	6.9
175	7.5
200	8.1
225	8.7
250	9.3
275	9.9
300	10.5
350	11.7

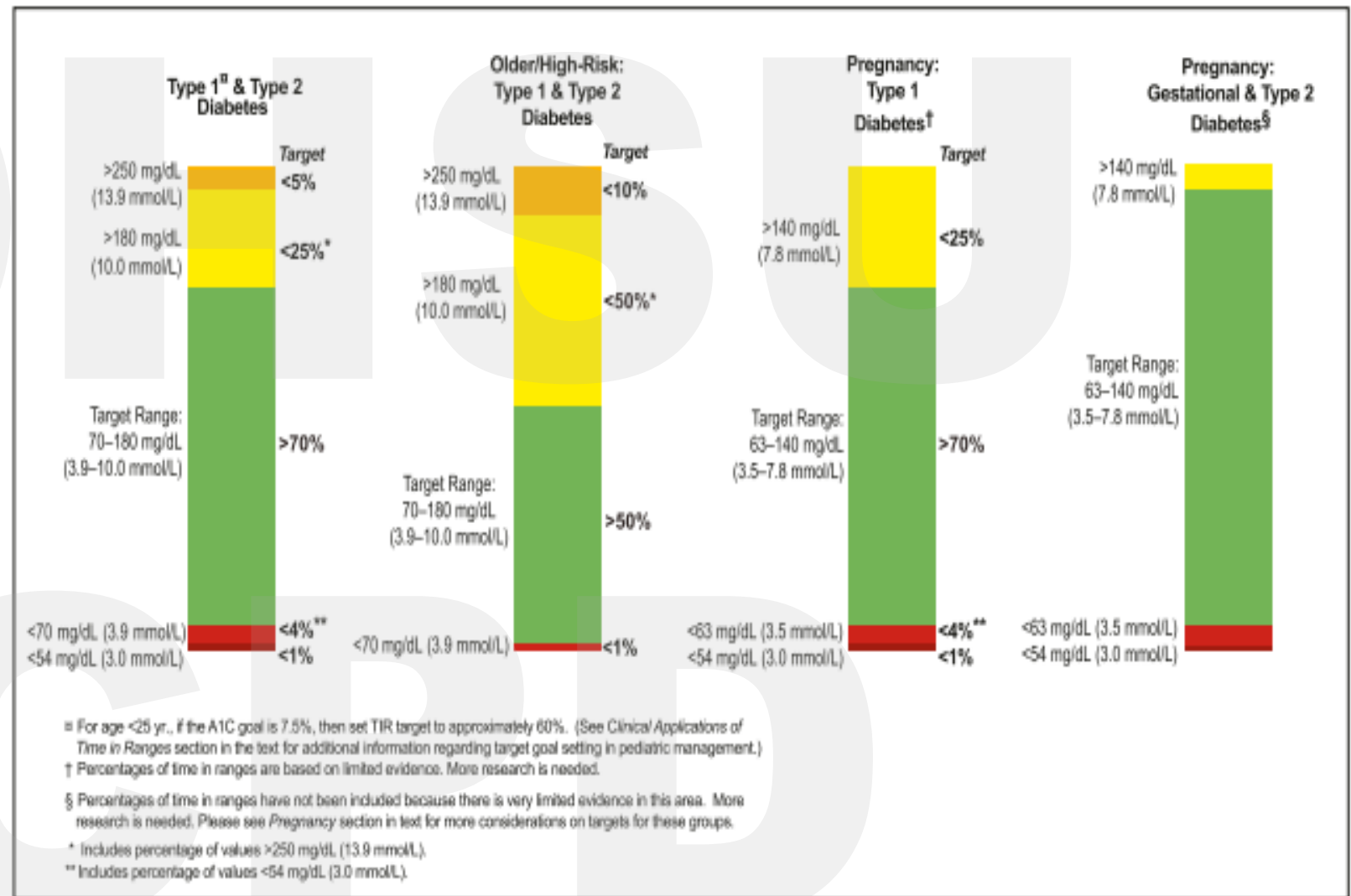
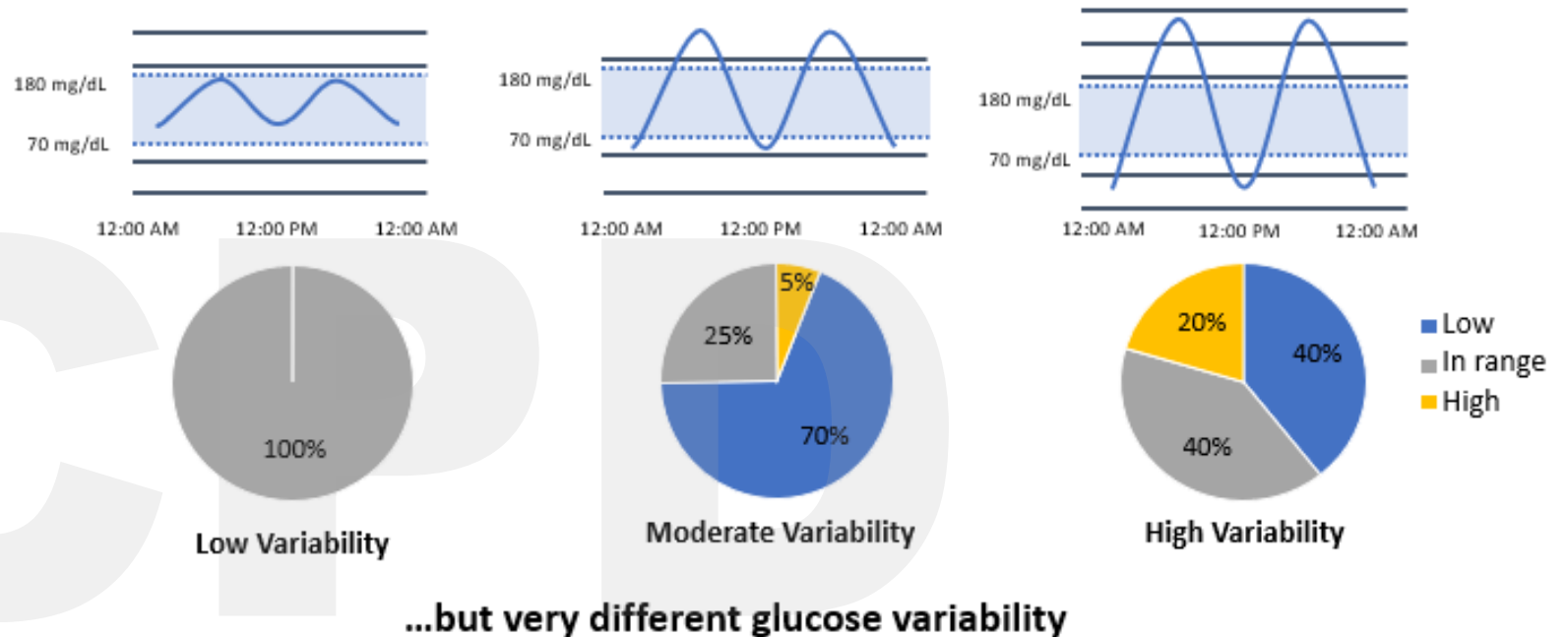


Figure 1—CGM-based targets for different diabetes populations.

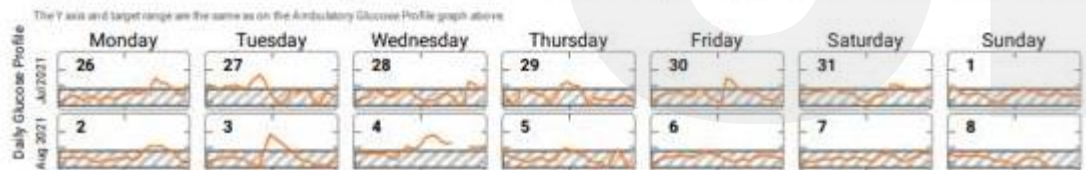
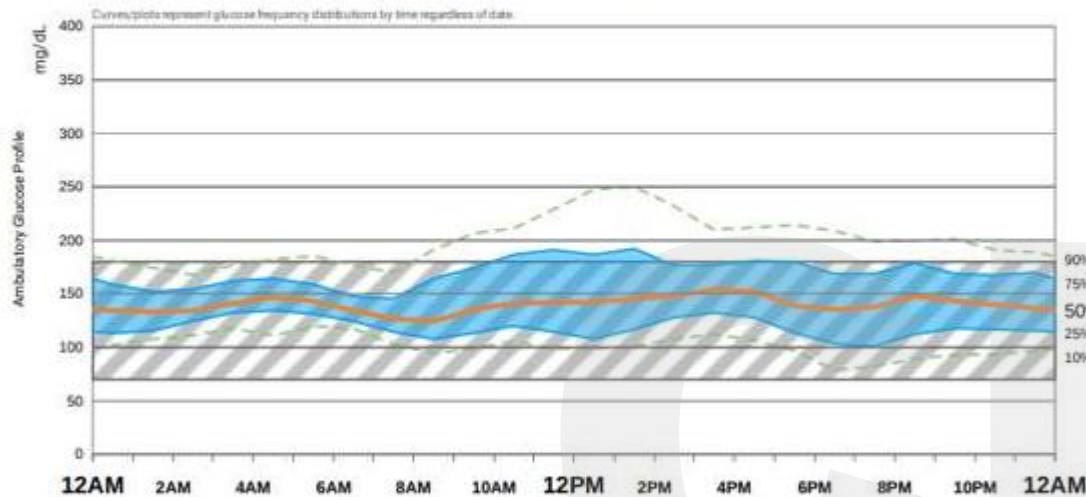
# Glycemic Variability

- Also called coefficient of variation: Standard deviation divided by mean glucose
- Higher GV is associated with a higher risk of hypoglycemia and microvascular complications compared to those with similar HbA1c and lower GV
- Stable is considered <36%
- Targeting GV can help guide safer treatment decisions vs focusing on A1C
- Increased GV is associated with:
  - Greater risk of hypoglycemia (severity, duration, and frequency)
  - Long-term increases in DM complications
  - Decreased quality of life and mood

These 3 people have an A1C of 7.0% and an average BG of 154 mg/dL...



# CGM Sample Reports (Dexcom Clarity vs LibreView)

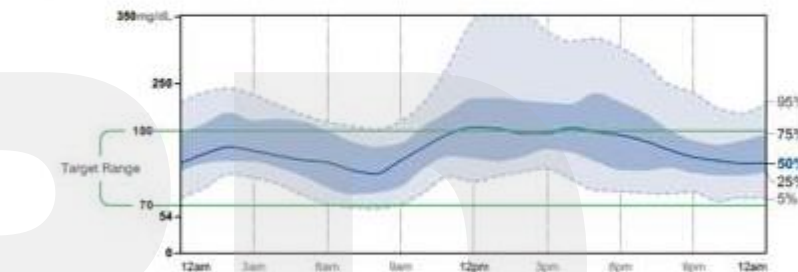


U.S. Patent No. Des. 773,479, patents pending - HealthPartners Institute for International Diabetes Center - All Rights Reserved. CapGIAAP v. 3.2



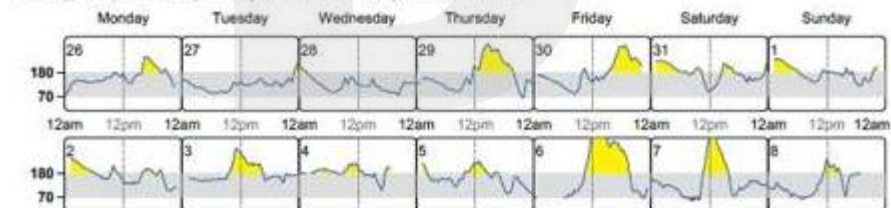
## AMBULATORY GLUCOSE PROFILE (AGP)

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



## DAILY GLUCOSE PROFILES

Each daily profile represents a midnight to midnight period with the date displayed in the upper left corner.



Source: Battelino, Taler, et al. "Clinical Targets for Continuous Glucose Monitoring Data Interpretation: Recommendations From the International Consensus on Time in Range." Diabetes Care, American Diabetes Association, 7 June 2019, <https://doi.org/10.2337/dci.19-0028>.

# An Implementation Roadmap

- Identify individuals who could benefit from CGM
- Select the device
- Determine device access
- Device use and support
- Data capture
- Report processing
- Report interpretation and documentation
- Billing



# Coverage

- CGM coverage depends on type of insurance (can be a vicious cycle!)
- Preferred products and approved suppliers vary (criteria changes frequently)
- Create a quick reference guide of most common insurers in the area

	Medicare	Medicaid	Commercial
Criteria	Medicare A/B: recently relaxed restrictions to 1+ insulin injection/day (from 3+), no longer need documentation about checking 4x/day  <i>Visit with ordering provider required every 6 months for renewal</i>	Type 1 diabetes Type 2 diabetes*  *dependent on specific Medicaid criteria (usually needs to be on MDI)	Highly variable coverage  No co-pay assistance card  May have a preferred CGM for patients with type 2 diabetes
Where	Usually DME	DME or Pharmacy	Pharmacy (some DME)

# Billing For CGM (Do not bill more than 1x/month)

- Personal CGM uses two CPT codes: 95249 (start-up/training) and 95251 (CGM interpretation)

CPT Code	Services	Who Can Perform Services	Reimbursement
95249	For personal CGM: Ambulatory CGM >72 hours; equipment provided, sensor placement, hookup, calibration of monitor, PWD training, and printout of recording	RN/LPN, PharmD/RPh, RD, CDCES, MA, Physician, NP, PA: billed by the supervising physician, advanced practitioner or hospital outpatient department	Medicare: \$61.67  Private: \$130

95251	For personal or professional CGM: Ambulatory CGM >72 hours; analysis, interpretation and report	Physician, NP, PA  Pharmacists can do this in many states with a collaborative practice agreement	Medicare: \$34.56  Private: \$98
-------	---	--	---

- Professional CGM utilizes two CPT codes: 95250 (placement) and 95251 (CGM interpretation)
  - With professional CGM, the clinic owns the devices that they lend out to individuals with diabetes. Currently available professional CGM devices include the Libre Pro and the Dexcom G6 Pro.

# Documentation Requirements: CPT 95251

- Duration of time worn
  - Must be >72 hours
- Time in range, time above range and time below range
- Any patterns of hypo or hyperglycemia
- Changes recommended to treatment plan
- A copy of device download or pasted text
- Billable once monthly
  - Evaluation and Management (E/M) codes can be billed on the same day as CGM codes using the modified ~25, as long as a distinct and separate E/M service was medical necessary and provided over and above the CGM service.
- Remote Monitoring Codes also an opportunity for billing if you are following up with their data and monitoring it.
  - 99457 for initial 20 mins
  - 99458 for each additional 20 mins
  - Up to 60 mins per month
  - For more info: <https://codingintel.com/remote-physiologic-monitoring-treatment-management-services-remote-monitoring/>

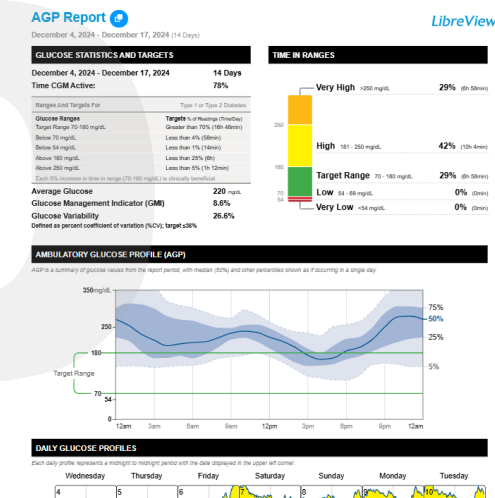
**Documentation**

**Summary of Professional CGM Findings**

1. Average glucose is 148mg/dL +/-48 BG range: 68-313
2. Total frequency of hypoglycemia: overall 0% BG<70, lowest BG of 68 occurred one time at 7pm
3. Nocturnal hypoglycemia was NOT noted
4. Hyperglycemia episodes: 22% BG>180, post-prandial, often d/t missing prandial insulin, injecting prandial insulin late, or eating high CHO with limited protein.
5. The patient was afraid to inject lispro if BG was in range before meal

**Lifestyle and Personalized Self-Management Education**

\*\*\*Sample documentation  
Include snip of CGM AGP Report



# EMR Considerations (renewal via DME)

- May need language within the EMR to sustain and support the use of the CGM. For example, a medical visit for Medicare and Medicaid every 6 months, including documentation of insulin use (virtual visits count).
- Sample Standardized EPIC Phrase
  - *The individual is using 3 or more administrations of insulin per day [ ] or using an insulin pump [ ] The individual is using CGM [ ] and/or checking blood glucose levels 4 times/day or more [ ] The individual has been glucose monitoring 4 or more times per day continuously for the last 90 days.*
  - *The individual may be paying for strips with cash and/or using samples so prescription count may not match the prescribed amount.*
  - *The use of a continuous glucose monitoring device is medically necessary. The CGM device is/will be used to lower the risk of hypoglycemia (including very low and/or nocturnal) The CGM device is/will be used to adjust insulin dosing based on glucose data, food intake, activity and glucose trends.*
  - *The individual is being seen in the office by the endocrinologist and endocrinology team every 6 months. Diabetes diagnosis E10.9 (type 1) [ ] or E11.9 (type 2 DM, insulin treated) [ ]*
  - *Additional criteria for CGM use: History of very low hypoglycemia [ ] Nocturnal hypoglycemia [ ] Day-to-day variations in work schedule, meal-time, or activity [ ] Wide variations of pre-prandial blood glucose levels (exceeds 100mg/dL) [ ] History of severe glycemic excursions [ ] History of hospital admissions for DKA/HHS/severe hyperglycemia or hypoglycemia [ ]*



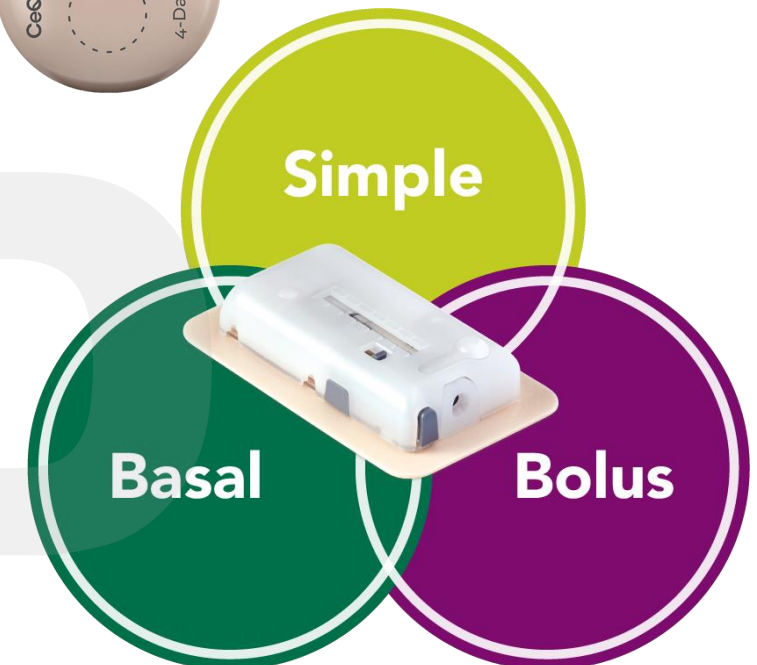
# Future of CGM

- Precision and accuracy to improve with next generation sensors to contribute to more reliable and consistent readings
- Improved wearability and comfort with advancements in sensing, materials, design
- Remote patient monitoring and telemedicine with potential to integrate telemedicine platforms into HER (work in progress)
- Integration with other health apps and technology
- Continuous ketone measurements and other health metrics incorporated with a CGM
- As time-in-range from CGM downloads is adopted more in clinical practice, it will likely replace the need for HbA1c measurements

# Technology & Devices for Type 2 Diabetes: Continued



Powered by  
FreeStyle Libre 2



# Bigfoot Biomedical

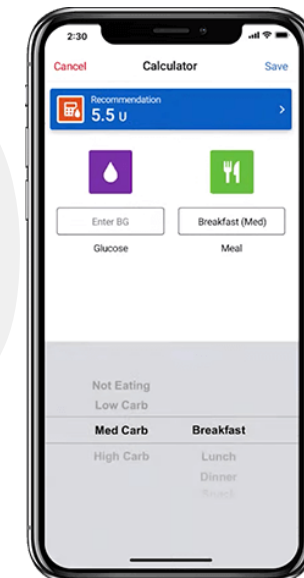
- Currently available only to contracted health care professionals
- Monitor glucose continuously and give readings on demand without fingersticks
- Do the math for the person with diabetes to determine the correction and meal doses recommended by the health care professional
- Allow the person with diabetes to see glucose ranges and insulin dose information directly on their cell phone
- Provide capability for alerts when glucose is low
- Help remember when the person with diabetes took their last insulin dose



Black cap:  
Long-acting  
White cap:  
Rapid-acting  
Bigfoot BG  
meter  
Bigfoot Unity  
app  
Bigfoot Clinic  
Hub (cloud-  
based portal)

# InPen (Reusable Smart Pen)

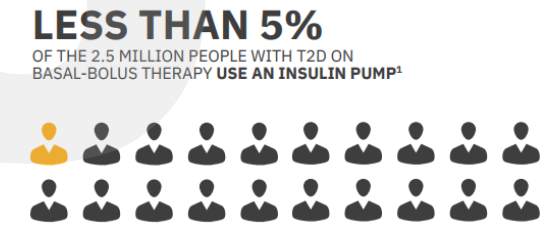
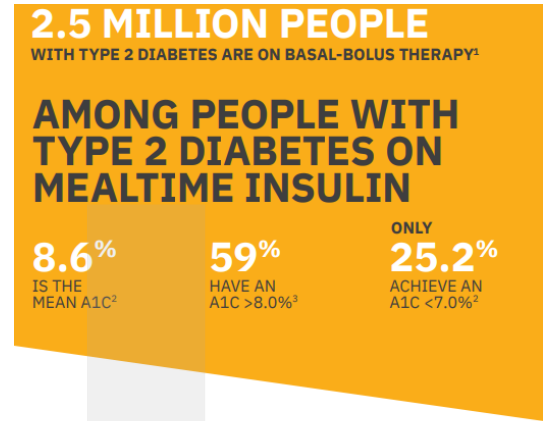
- First FDA-cleared Smart Insulin Pen
- Offers dosing support with the convenience and low cost of an insulin pen paired to an integrated diabetes management app
- Pre-filled insulin cartridges for Lispro, Aspart or Fiasp
- Compatible with Guadian Connect CGM and Dexcom G6/G7
- There are three different ways to calculate insulin doses using the InPen app:
  - Fixed Dosing
  - Meal Estimation
  - Carbohydrate Counting
- Prescription only
- NEW: SmartMDI with Simplera CGM (Medtronic's first disposable, all-in-one CGM, half the size of the previous versions, 7-day wear)
  - First system to recommend corrections for missed or inaccurate insulin doses, providing real-time, personalized insights for individuals on multiple daily injection (MDI) therapy.





# Omnipod 5

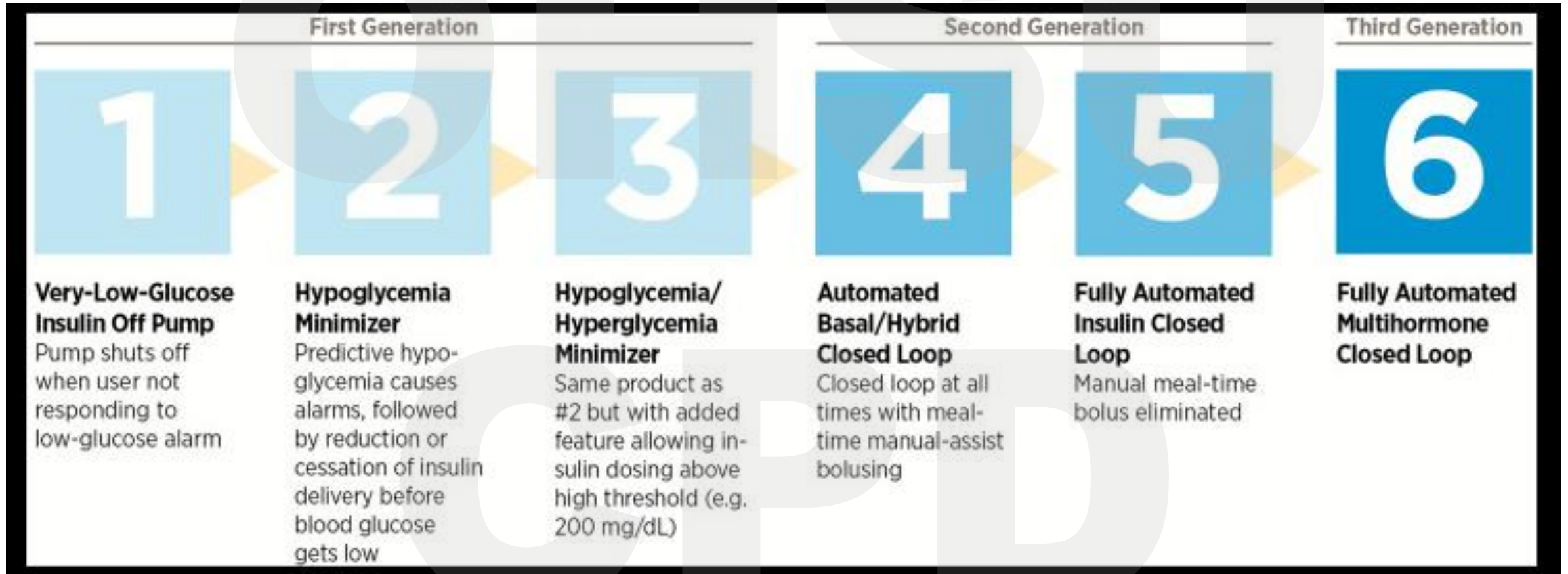
- First and only automated insulin delivery (AID) system cleared for adults with type 2 diabetes, ages 18+.
- Uses CGM sensor value and trend to automatically increase, decrease, or pause insulin delivery every 5 minutes.
  - SmartAdjust™ technology predicts future glucose levels up to 60 minutes ahead using your CGM sensor value and trend.
  - Adjusts insulin delivery based on a customizable target, ranging from 110-150 mg/dL.
  - Automatically increases, decreases or pauses insulin every 5 minutes.
  - Bolus doses can be given for meals using the Omnipod 5 App or Controller.
- Lowered A1C regardless of patients' race, ethnicity, GLP-1 use, and whether they were carb counting or not. In patients with a baseline of A1C  $\geq 9\%$ , the A1C was lowered by 2.1% (-0.8% in full study population)
  - More time in range by nearly 5 hours a day (% of time spent between 70-180 mg/dL)
  - No demonstrated increase in time in hypoglycemia (% time spent <70 mg/dL)
  - ~29% reduction in insulin need
- CGM: Dexcom G6, Dexcom G7, and FreeStyle Libre 2 Plus Sensor (different pods depending on which sensor is used)



Pod shown without the necessary adhesive

# Automated Insulin Delivery (AID)

- First gen: 1990-2010s; Second gen: 2010s-current, Third (Future?)



# AID Concepts for PCPs

- AID systems deliver basal insulin at a variable rate in addition to having adjustable targets that patients may set for physical activity, surgery, etc.
- Bolus insulin may be administered manually or calculated and administered by the system based on mealtime or carbohydrate settings
- The most common AID complications are related to hypo- or hyperglycemia due to device malfunctions or inadvertent changes to settings
- All AID users should be prepared with:
  - Back-up, unexpired basal and bolus insulin with pens or syringes for administration
  - Hypoglycemia plans, including fast-acting carbohydrates and glucagon

# Lilly Tempo

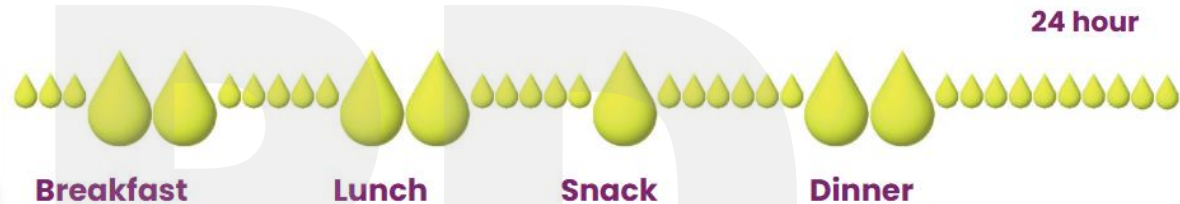
- Tempo pens: Lyumjev, Basaglar and Humalog
- Provide patients with dosing guidance through the bolus Insulin Dose Calculator when prescribed (set up by provider)
- Two Tempo Insulin Dosing Features:
  - Bolus: Insulin Dose Calculator
    - Fixed Dose + Correction Factor OR Insulin-to-Carbohydrate Ratio + Correction Factor)
  - Basal: Insulin Adjustment Program and Titration
- Automated glucose and insulin dose data tracking
- User-enabled medication reminders notify patients when to dose insulin and measure their blood glucose
- Real-time feedback about glucose readings may help patients address highs and lows



# V-GO

- Insulin delivery device that is worn like a patch for 24 hours
- Continuous subcutaneous insulin infusion over 24 hours at a preset basal rate of 20, 30 or 40 units per 24 hours
- On-demand bolus dosing up to 36 units per 24 hours in 2 unit increments
- V-Go uses only U100 fast acting insulin (e.g. Humalog, Novolog).
- Total Capacity:
  - 76 units, 66 units or 56 units per device over 24 hours

**Simple  
Effective  
Efficient**



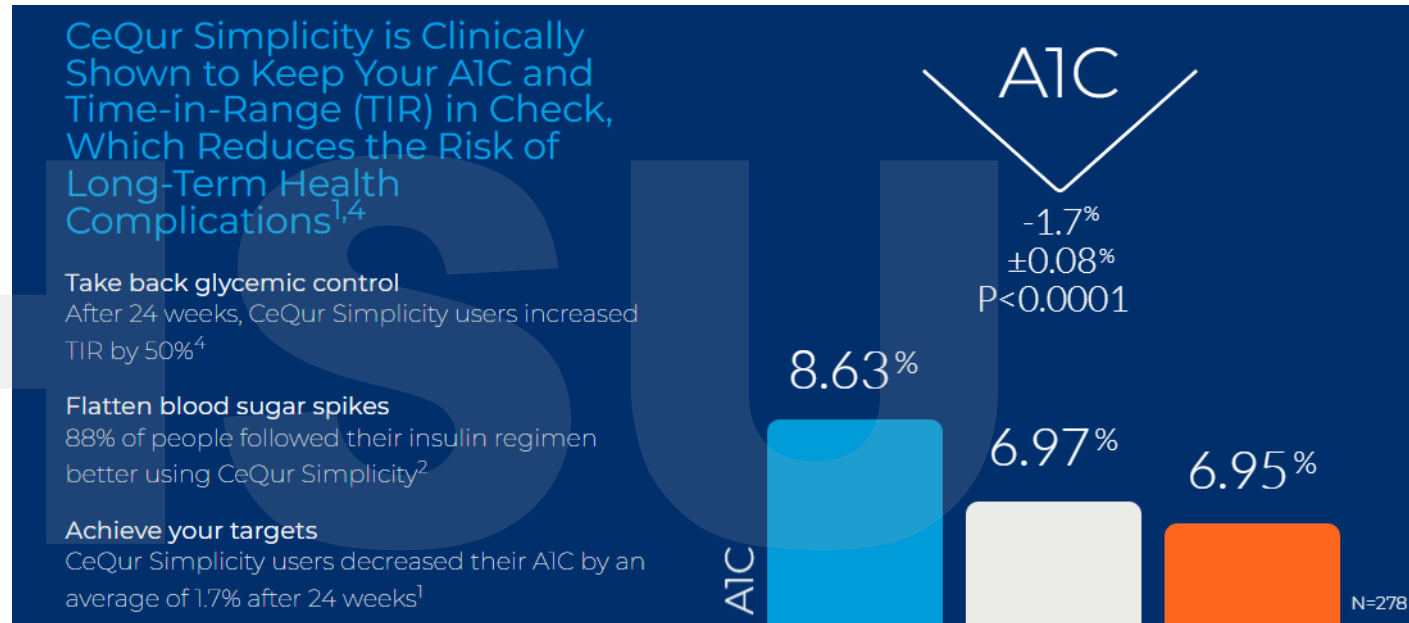
V-Go® is an **all-in-one** insulin delivery patch that delivers a continuous preset **basal rate** of insulin and provides on-demand **bolus dosing**.<sup>1</sup>  
Clinically proven to reduce A1C with less insulin.<sup>2-10</sup>

**See How V-Go Works**



# CeQur Simplicity

- Accurately delivers a 2-unit dose with every squeeze of the buttons
- Small, flexible cannula for insulin delivery
- Low profile, less than 4 stacked-quarters thick
- Soft corners for comfort
- Water-resistant, and stays on through bathing, exercise, sleep
- Holds up to 200 units of rapid-acting insulin
- Bolus-only patch to complement existing basal insulin therapy
- Up to 4-day wear
- No app integration or additional technology
- Prescription coverage available



<https://myceqursimplicity.com/>; Bergenstal R, Peyrot M, Dreon D, Aroda V, Bailey T, Brazg R, Frias J, Johnson M, Klonoff D, Kruger D, Ramtoola S, Rosenstock J, Serusiat P, Weinstock R, Naik R, Shearer D, Ziaick V, Levy B on behalf of the Calibra Study Group. 2019. Implementation of Basal-Bolus Therapy in Type 2 Diabetes: A Randomized Controlled Trial Comparing Bolus Insulin Delivery Using an Insulin Patch with an Insulin Pen. Diabetes Technology and Therapeutics 21(5):1-13.

# Patient Case: CeQur & Libre 3 start

- 43-year-old male referral to PharmD for management of pancreatic diabetes. Diagnosed recently in July 2024 with A1c 14.7%.
- Work-up to be completed by GI for exocrine pancreatic dysfunction and severe diarrhea.
- Patient exhibits severe needle phobia including sensor insertion.
- PMH alcohol use disorder in remission, tobacco use disorder, elevated liver enzyme. Continued weight loss with BMI 22 (60 kg).
- Can take up to 30 minutes to give daily basal dose (10 units qd).
- Commercial insurance, employed as a facility engineer. Recently prescribed sensor but not placed yet. Prefers to self-train. BG 300-400's.
- Recommendations: Pancreatogenic diabetes (also known as type 3c), appears to be progression towards insulin dependency.
  - Increase glargine up to 20 units. Attempt to start prandial insulin at 2 units per meal.

# Patient Case: Continued

- Once CGM started on smartphone, patient shared data with clinic
- Discussed the importance of tapering glargine up to suggested dose 0.2-0.4 units/kg and the need for prandial insulin + correctional scale
- Given his technical background and interest in devices, we reviewed the use of CeQur technology and I provided 10-min training video (found on YouTube)
  - <https://www.youtube.com/watch?v=35htqE3Qpis>

October 28, 2024 - November 10, 2024 (14 Days)

## GLUCOSE STATISTICS AND TARGETS

October 28, 2024 - November 10, 2024 14 Days

Time CGM Active: 48%

Ranges And Targets For	Type 1 or Type 2 Diabetes
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)

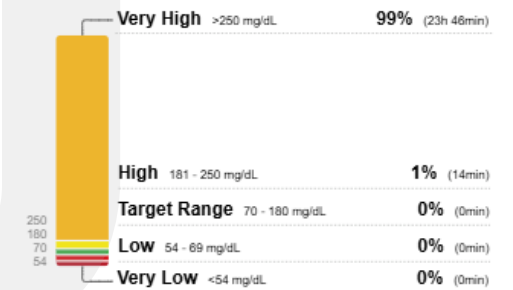
Average Glucose 374 mg/dL

Glucose Management Indicator (GMI) 12.3%

Glucose Variability 9.9%

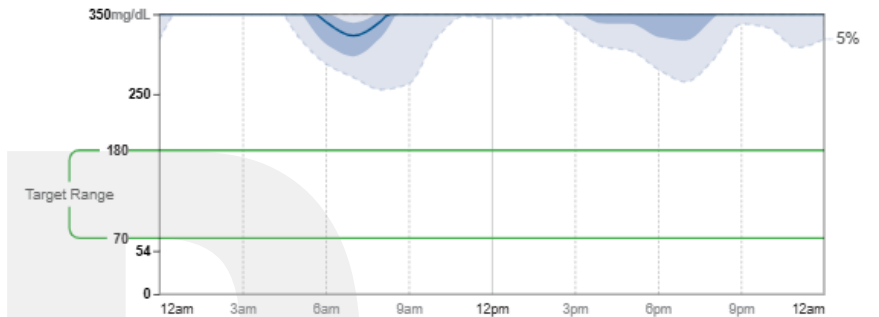
Defined as percent coefficient of variation (%CV); target  $\leq 36\%$

## TIME IN RANGES



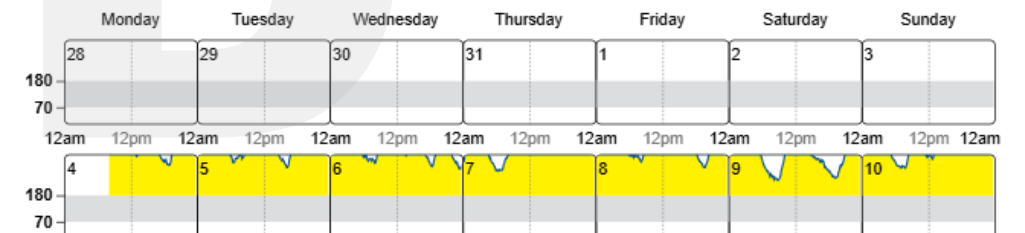
## AMBULATORY GLUCOSE PROFILE (AGP)

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



## DAILY GLUCOSE PROFILES

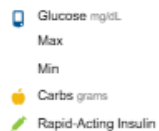
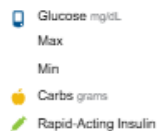
Each daily profile represents a midnight to midnight period with the date displayed in the upper left corner.



Source: Battelino, Tadei, et al. "Clinical Targets for Continuous Glucose Monitoring Data Interpretation: Recommendations From the International Consensus on Time in Range." Diabetes Care, American Diabetes Association, 7 June 2019, <https://doi.org/10.2337/710028>.

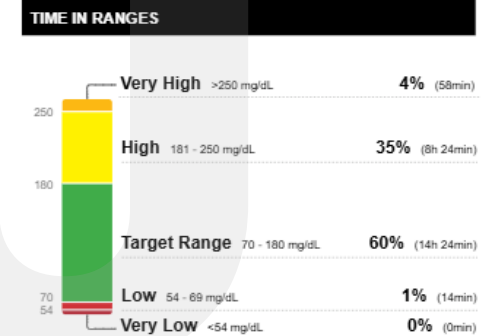
# Patient Case: Continued

- Glargine dose stable at 20 units daily
- Aspart via CeQur at ~4-12 units with each meal x4
- Patient satisfied with results and more comfortable with insulin delivery device. Now interested in pursuing AID with Omnipod 5.
- All visits were completed virtually



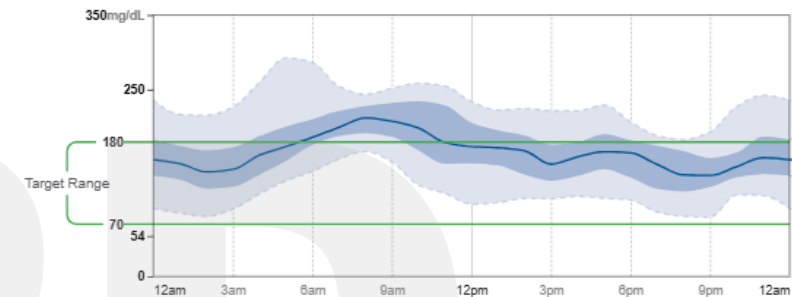
January 8, 2025 - January 21, 2025 (14 Days)

GLUCOSE STATISTICS AND TARGETS	
January 8, 2025 - January 21, 2025	14 Days
Time CGM Active:	97%
Ranges And Targets For <span style="float: right;">Type 1 or Type 2 Diabetes</span>	
<b>Glucose Ranges</b>	<b>Targets</b> % of Readings (Type/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% (8h)
Above 250 mg/dL	Less than 5% (1h 12min)
Each 5% increase in time in range (70-180 mg/dL) is clinically beneficial.	
<b>Average Glucose</b>	169 mg/dL
<b>Glucose Management Indicator (GMI)</b>	7.4%
<b>Glucose Variability</b>	26.1%
Defined as percent coefficient of variation (%CV); target ≤6%	



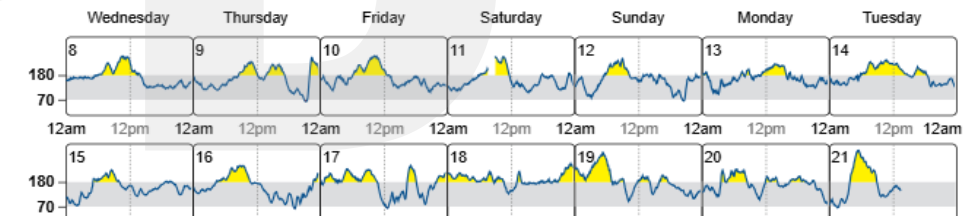
### AMBULATORY GLUCOSE PROFILE (AGP)

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



### DAILY GLUCOSE PROFILES

Each daily profile represents a midnight to midnight period with the date displayed in the upper left corner.



Source: Battelino, Tadej, et al. "Clinical Targets for Continuous Glucose Monitoring Data Interpretation: Recommendations From the International Consensus on Time in Range." *Diabetes Care*, American Diabetes Association. 7 June 2019. <https://doi.org/10.2337/doi19-0028>.

# Resources


- ADCES danatech (<https://www.adces.org/danatech>)
  - Danatech Technology Competency tool: <https://www.adces.org/danatech/trainingeducation/diabetes-technology-tools/tech-competency-tool>
- DiabetesWise (<https://pro.diabeteswise.org/>)
  - Coverage Finder: <https://pro.diabeteswise.org/prescriptions/none/none/none/none>
- PANTHER Program (<https://www.pantherprogram.org/>)
  - Point-of-Care Clinic Tools: <https://www.pantherprogram.org/clinic-tools>
- American Diabetes Association (<https://diabetes.org/about-diabetes/devicetechnology>)
- AACE Step by Step Guide to offering CGM
  - <http://pro.ace.com/cgm/toolkit/integrating-cgm-clinical-practice>



# Common Smartphone Apps



**mySugr**

- Diabetes log book, bolus calculator
- Share all data by downloading and printing
- For iOS and Android
- Free
- Pro version also free if synched to a compatible device

 **MySugr**




**Clarity**

- Diabetes management software
- Compatible with G6, G7, and Stelo
- Share data with HCPs via a unique code
- For iOS and Android
- Share data with family and caregivers via Follow app
- Free

 **Clarity**  **Follow**

**FreeStyle LibreLink**

- Diabetes management software
- Compatible with FreeStyle devices
- For iOS and Android
- Share data with family and caregivers via LibreLinkUp
- Share data automatically with HCPs with LibreView
- Free

  **Libre Link**  **Libre LinkUp**

OHSU

**Thank you!**

CPD