FreeStyle Libre

PATIENT PROFILE

Female, 65-70 years old

Living with T2D for 14 years

Image not of actual patient

CLINICAL CASE STUDY

Impact of FreeStyle Libre 2 system on glycemic variability and hypoglycemia

Case provided by
Dr. Jodi Strong, DNP, CDECS, BC-ADM, CPT
Diabetologist
Aspirus

This case study is intended to be used for educational purposes only. Individual symptoms, situations, and circumstances may vary.
Information included in this presentation is based on assessment and input from patient's healthcare provider.
Medicare and other payor criteria may apply.
T2D= Type 2 diabetes.

Abbott

Important Safety Information

Failure to use FreeStyle Libre systems as instructed in labeling may result in missing a severe low or high glucose event and/or making a treatment decision, resulting in injury. If glucose reading and alarms (if enabled) do not match symptoms or expectations, use a fingerstick value from a blood glucose meter for treatment decisions. Seek medical attention when appropriate or contact Abbott at 855-632-8658 or FreeStyleLibre.us for safety info.

Initiating CGM with FreeStyle Libre 14-day system

Patient History*

- **Baseline HbA1c:** 8.4%
- **Baseline BMI:** 37.1
- **Age at diagnosis:** ~50-55
- **Diabetes therapy regimen:**
  - **Insulin glargine** 78 units
  - **Insulin aspart** 24-26-32 units with meals
  - **Metformin ER** 500 mg, 2 tabs BID
  - **Canagliflozin** 300 mg daily
- **Glucose monitoring regimen:**
  - Blood glucose monitoring (BGM); Patient conducting 4x day testing around mealtime prior to visit

Why CGM?*

Patient and care team concerns:

- Variable glucose levels
- Understanding the impact of food and exercise on glucose levels
- Worsening complications and fear of hypoglycemia (FOH)

"I'm scared I won't wake up."

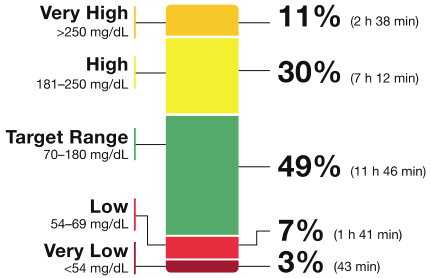
*Actual patient information.

Initial Ambulatory Glucose Profile (AGP) Report*

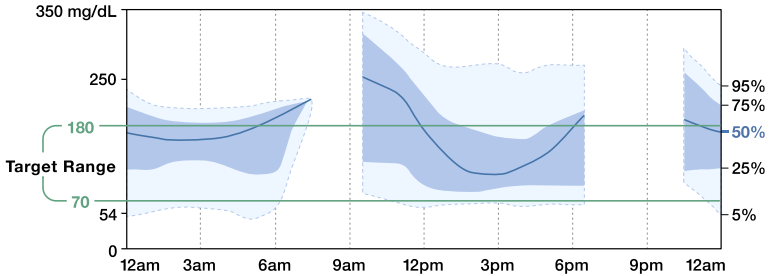
Apr 14 – 27, 2020 ---------- Jan 8-21, 2021

HbA1C†	8.4%
Weight	237 lb.
BMI	37.1
% Time CGM is Active	65%
Glucose variability	42.4%

Time in range



Ambulatory glucose profile



NEW INFORMATION REVEALED BY FREESTYLE LIBRE 2 SYSTEM

Variable glucose levels and nighttime hypoglycemia confirmed

- Significant glycemic variability: 42.4%
- Inconsistent mealtimes and postprandial glucose spikes
- Sustained variability below median throughout the night
- 49% of time spent in the target range
- 41% of time spent in hyperglycemia

*Actual patient information. †Glucose data was not extensive enough to calculate glucose management indicator (GMI).

Initial CGM reports inspired informed decision-making

Patient Discussion Topics

- Insulin use, including time of day, any missed doses, and the importance of taking it before vs. after meals to prevent large changes in glucose
- Food, snacks, and drink choices
- Exercise and its affects on glucose
- Consistency of medication-taking behaviors
- Scan more frequently to avoid data gaps and increase percent time CGM is active

Treatment Plan Adjustments

- Adjusted insulin:
  - Glargine changed to degludec 30 units
  - Aspart reduced to 8-10-12 units with meals
- Reminded patient to use insulin before mealtime rather than afterward to minimize postparandial hypoglycemia
- Referred patient to a Certified Diabetes Care and Education Specialist (CDCES) to discuss carbohydrate counting, a consistent carbohydrate diet, and exercise
- Collected more frequent results via remote download

Patient Plan

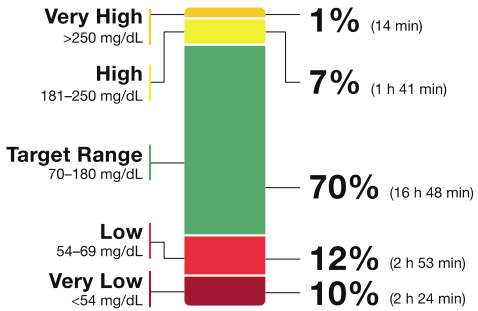
- Monitor carbohydrate intake
- Initiate diet and exercise plan
- Take insulin before meals
- Scan more regularly

3-week AGP Report*

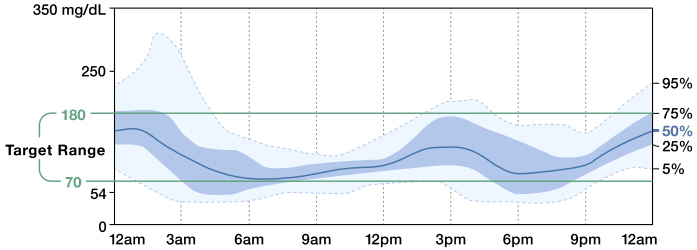
Apr 14-27, 2020 — **Jul 18-31, 20, 2020** — Oct 27-Nov 9, 2020

HbA1C	7.4%
Weight	230 lb.
BMI	36.0
% Time CGM is Active	87%
Glucose variability	43.8%

Time in range



Ambulatory glucose profile



NEW INFORMATION REVEALED BY FREESTYLE LIBRE 14-DAY SYSTEM

Notable reduction in hyperglycemia offset by increased time in hypoglycemia

- Time in hyperglycemia reduced 33%[1]
- Resolution of midmorning glucose spikes
- Time in hypoglycemia increased 12%[1]
- Time in target range increased 21%[1]
- Time CGM was active increased 22%[1]

*Actual patient information.
1. Data on file. Abbott Diabetes Care.

3-month CGM reports informed decision-making

Patient Discussion Topics

- Increased hypoglycemia despite reductions in insulin
- Increased scanning frequency and remote downloads have enabled a more complete glycemic profile to guide insulin reduction from April to July
- Patient was congratulated on increasing time in the target range
- Causes of hypoglycemia
  - Increased exercise (joined a gym and began outdoor activities)
  - Insulin dosage
- Treatment of hypoglycemia

Treatment Plan Adjustments

- CGM reports informed changes in medication use and glucose monitoring
- Due to increased hypoglycemia:
  - Switched to FreeStyle Libre 2 system with real-time alarms*
  - Discontinued insulin aspart
  - Initiated GLP-1 therapy

Patient Plan

- Continue positive momentum with diet plan and carbohydrate counting recommended by physician as well as exercise
- Use real-time alarms* to prevent episodes of hypoglycemia

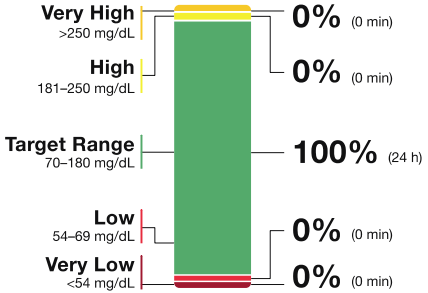
*Notifications will only be received when alarms are turned on and the sensor is within 20 feet of the reading device.

6-month AGP Report*

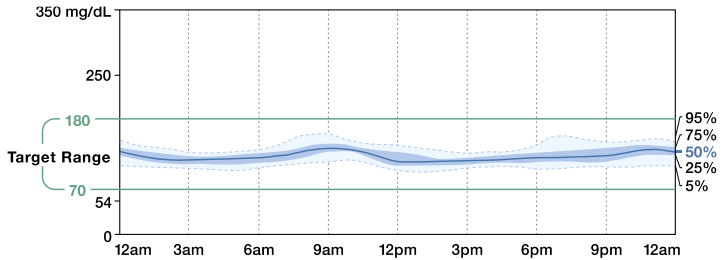
Apr 14-27, 2020 ----- Jul 18-31, 20, 2020 ----- **Oct 27-Nov 9, 2020**

HbA1C	6.3%
Weight	193 lb.
BMI	30.2
% Time CGM is Active	99%
Glucose variability	10.4%

Time in range



Ambulatory glucose profile



NEW INFORMATION REVEALED BY FREESTYLE LIBRE 14-DAY SYSTEM

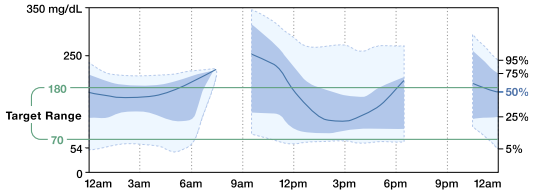
Stable management of glucose

- 100% time in range
- No hypoglycemia
- No insulin aspart required
- Glucose variability reduced to 10.4%
- 99% time CGM was active

*Actual patient information.

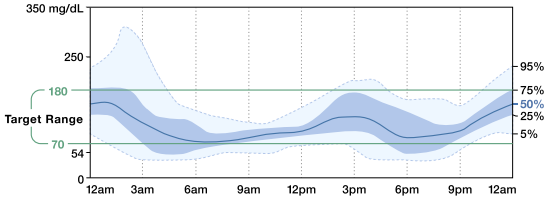
Stable glucose management in 6 months*

INITIAL REPORT
Apr 14-27, 2020



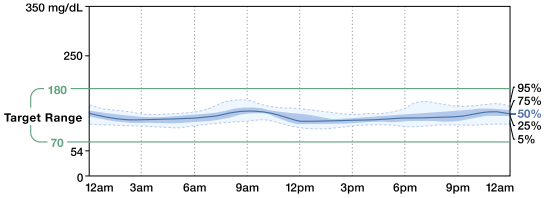
Initial report illustrated significant glycemic variability and nighttime hypoglycemia

3-MONTH REPORT
Jul 18-31, 2020



3-month post-CGM initiation report revealed improved management of high glucose and new episodes of hypoglycemia

6-MONTH REPORT
Oct 27-Nov 9, 2020



6-month post-CGM initiation report showed consistent management of glucose

*Results are consistent with real-world evidence showing stabilization of glucose within 3 to 6 months using FreeStyle Libre systems.

Stable glucose revealed by FreeStyle Libre 2 system

RESULTS ACHIEVED IN THIS PATIENT WITH T2D STRUGGLING WITH GLYCEMIC VARIABILITY AND OBESITY

2.1%

Total reduction in A1C[1]

8.4% baseline to 6.3%

100%

Time in range

From 49% at baseline

FreeStyle Libre 2 alarms* helped the patient tightly manage glucose and minimize time in hypoglycemia†

FreeStyle Libre 2 data helped the patient gain greater understanding of how food and exercise affect glucose†

- Resulted in 44-pound weight loss and 6.9-point BMI reduction†[1]

Cost savings from reductions in insulin and medication use†

Glucose data from the FreeStyle Libre 2 system helped reinforce patient's well-being when glucose is better managed†

***Notifications will only be received when alarms are turned on and the sensor is within 20 feet of the reading device.
†Based on assessment and input from patient's healthcare provider.
1. Data on file. Abbott Diabetes Care

Abbott