Workshop Cases

- Work with your partner on cases

- Apply systematic approaches to BGM & CGM reports
  - Adequate data?
    - ➢ 14 days of data or at least 70% or ~10 days of CGM wear
  - Mark directly on the profile sheet:
    - ➢ Insulin type(s) & dose times under the curve
    - ➢ Usual times for waketime (W), breakfast (B), lunch (L), dinner (D) & bedtime (BT).
  - Look for patterns of low & high glucose readings.

- You'll have 25 minutes before case review

Case 1

62 yo with a PMH of T2DM, CAD s/p CABG, s/p Heart transplant, HTN, HLD, Stage 3a CKD (eGFR 53)

DM Rx:
- Insulin degludec 35 U at HS (basal insulin)
- Insulin lispro 0u/5u/12u for B/L/D pre-meals (bolus insulin)
- Empagliflozin 10mg daily (SGLT2i)

Glucose Monitoring:
- Uses DexCom G6 CGM

VS / Data:
- 120/68
- Chol 150 | LDL 70 | TG 110 – HDL 54 | eGFR 53 (all > 1 year ago)

Glucose

Average Glucose
159 mg/dL

Standard Deviation
45 mg/dL

GMI
N/A

Time in Range
2% Very High
31% High
66% In Range
<1% Low
0% Very Low
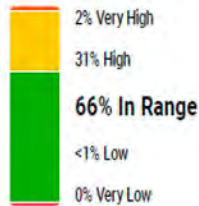
Target Range:
70-180 mg/dL

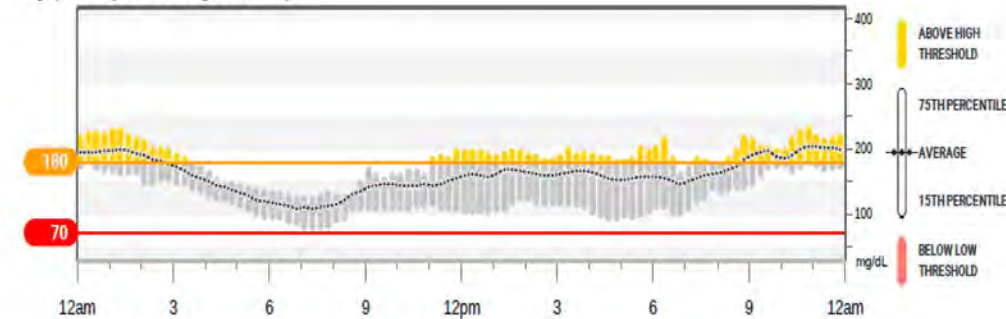**Sensor Usage**
Days with CGM data
79%
11/14

Avg. calibrations per day
0.0

Top Patterns

(1) Steven's best glucose day was September 24, 2020
Steven's glucose data was in the target range about 89% of the day.

This graph shows your data averaged over 14 days

- 400
ABOVE HIGH THRESHOLD
- 300
75TH PERCENTILE
180
- 200
AVERAGE
15TH PERCENTILE
70
- 100
mg/dL
BELOW LOW THRESHOLD

12am 3 6 9 12pm 3 6 9 12am

Assessment:
1.
2.

Glucose Data Report:

Date of Interpretation:	10/6/2021
Data period:	9/23/21-10/6/2021
Readings:	~4000
Mean BG (mg/dL):	159
Range BG mg/dL):	68-204
% Hyperglycemia (>180):	_____%
% at Target (70-180):	_____%
% Hypoglycemia (<70):	_____%

Average BG (mg/dL) values by meals:

AC Breakfast (FBG):	_____
AC Lunch:	_____
AC Dinner:	_____
HS:	_____

Lab Results		
Component	Value	Date
HGBA1C	6.7	10/07/2021
HGBA1C	6.4	06/18/2021
HGBA1C	8.7 (H)	03/16/2021

Assessment:

*T2DM – controlled vs. not controlled?

A1c –

AGP –

1.

2.

Plan:
- **T2DM:**

1.

2.

3.

4.

5.

- **CKD:**

1.

- **CVD:**

1.

RTC in 3 months

Case 2

62 yo with a PMH of T2DM, CAD, Obesity (BMI 33), Kidney stones & UTIs.

DM Rx:

- Glipizide XL 10mg daily before PM meal (SU)
- Metformin XR 2000mg daily (Biguanide)
- Pioglitazone 30mg daily (TZD)

DM Rx Intolerances/Contraindications:

- Empaglifozin - UTI's (SGLT2i)
- Previously tried semaglutide (GLP-1) x 1 week but stopped after mild GI upset

Glucose Monitoring:

- Using Libre isCGM

Data:

- Weight: 150 kgs | 330lbs | BMI 33kg/m2

Case 2 – isCGM Data period: 9-8-21 to 10-7-2021

Glucose (BG)

All Readings

■	Very High	43%	> 250 mg/dL
■	High	46%	181-250 mg/dL
■	Target Range	11%	80-180 mg/dL
■	Low	0%	54-79 mg/dL
■	Very Low	0%	< 54 mg/dL

Average	250 mg/dL
SD	56 mg/dL
Readings/Day	1.8
Median	245 mg/dL
Highest	450 mg/dL
Lowest	157 mg/dL

Time of Day

	Morning (5 am - 10 am)	Afternoon (10 am - 3 pm)	Evening (3 pm - 9 pm)	Night (9 pm - 5 am)
Readings	12	16	24	2
Average (mg/dL)	301	240	232	233
SD (mg/dL)	68	41	47	6

Assessment:

1.
2.
3.

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Case 2 – Assessment/Plan

Component	10/7/2021	3/26/2021	1/22/2021
HbA1C, POC 4.0 - 6.0 %	10.1	7.6	7.0

Assessment:
T2DM –
1.

2.

3.

4.

Plan:
- **T2DM:**
1.
2.
3.
4.
5.
6.
- **RTC in 3 months**

Case 2 – 3 Month Follow-up: 12-23-21 to 1-21-2021

Glucose (BG)

All Readings

■ Very High	**3%**	> 250 mg/dL
■ High	**24%**	181-250 mg/dL
■ Target Range	**71%**	80-180 mg/dL
■ Low	**2%**	54-79 mg/dL
■ Very Low	**0%**	< 54 mg/dL

Average	156 mg/dL
SD	42 mg/dL
Readings/Day	2.1
Median	147 mg/dL
Highest	288 mg/dL
Lowest	73 mg/dL

Time of Day

	Morning (5 am - 10 am)	Afternoon (10 am - 3 pm)	Evening (3 pm - 9 pm)	Night (9 pm - 5 am)
Readings	12	19	5	26
Average (mg/dL)	193	152	173	138
SD (mg/dL)	39	47	48	27

Assessment:
1.
2.
3.

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Case 2 – 3 Month Follow-up

HPI: Patient reports "improved BG numbers" & 5lb weight loss.

Component	1/21/2022	10/7/2021	3/26/2021
A1C, POC 4.0 - 6.0 %	7.7	10.1	7.6

Assessment:

T2DM –
1.
2.
3.
4.
5.

Plan:
- **T2DM:**
    1.
    2.
    3.
    4.
    5.
    6.
    7.

  RTC in 3 months

Case 3

60 yo with a PMH of T2DM, HTN, HLD, PE/DVT & Obesity.

DM Rx:
- Metformin XR 2000mg daily
- Insulin glargine 60 units in PM (basal)
- Insulin lispro 5 units with meals PLUS BG correction by sliding scale
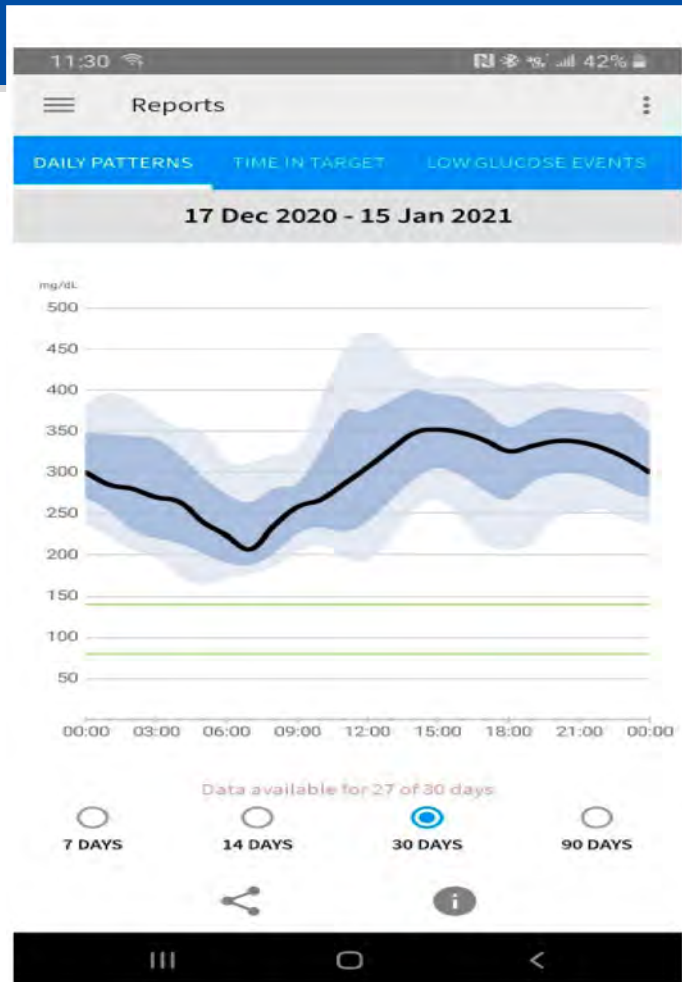   - Sliding Scale: 2 units/50mg/dL > 150

Glucose Monitoring:
- Using rtCGM

FHx:
- Father: MI/CAD (62)

Case 3 – rtCGM Data period: 12-17-20 to 1-15-2021

Assessment:
1.
2.
3.

Case 3 – Assessment/Plan

Component	1/14/2021	10/26/2020	9/02/2020
A1C, POC 4.0 - 6.0 %	11.1	10.5	9.9

Assessment:
T2DM –
1.
2.
3.
4.

Plan:
- **T2DM:**
    1.
    2.
    3.
    4.
    5.
    6.

- **RTC in 3 months**

BBC: Basal-Bolus-Correction insulin; MTF: Metformin

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Case 3 – 8 Month Follow-up: 9-22-21 to 10-5-21

GLUCOSE STATISTICS AND TARGETS

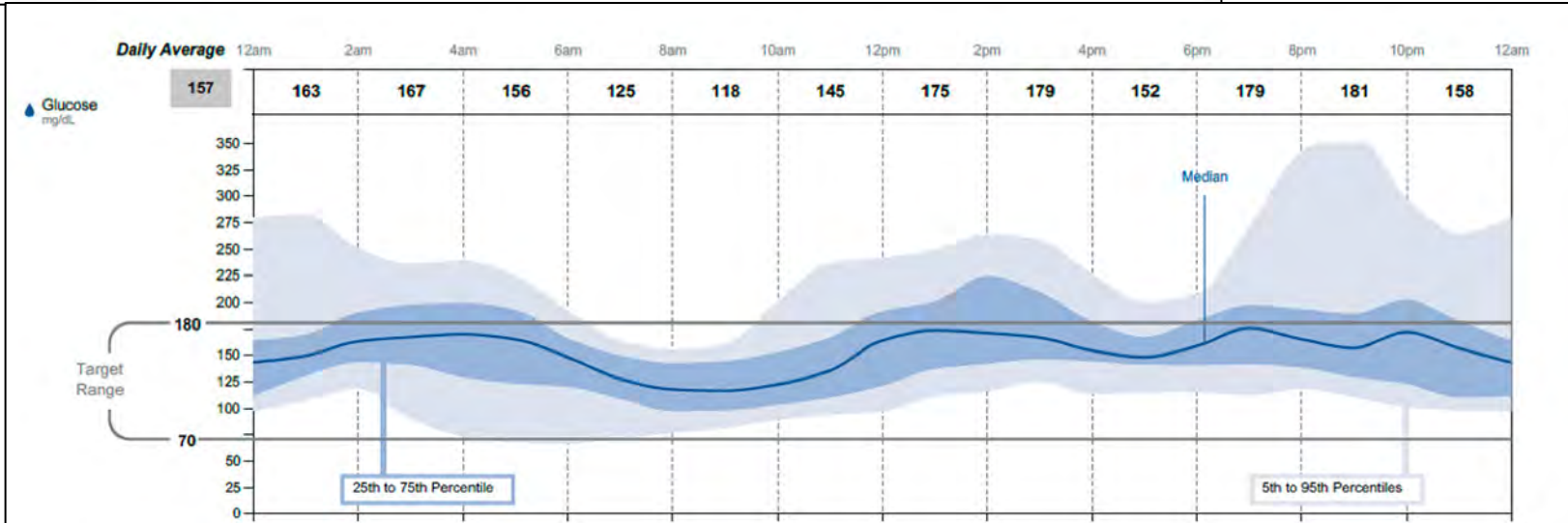**September 22, 2021 - October 5, 2021**   **14 Days**

% Time CGM is Active   **57%**

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)

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

Average Glucose   **157** mg/dL

Glucose Management Indicator (GMI)   **7.1%**

Glucose Variability   **33.2%**

Defined as percent coefficient of variation (%CV); target ≤36%

TIME IN RANGES

Very High >250 mg/dL   **5%** (1h 12min)

High 181 - 250 mg/dL   **23%** (5h 31min)

Target Range 70 - 180 mg/dL   **71%** (17h 3min)

Low 54 - 69 mg/dL   **1%** (14min)

Very Low <54 mg/dL   **0%** (0min)

Daily Average 157

12am	2am	4am	6am	8am	10am	12pm	2pm	4pm	6pm	8pm	10pm	12am
163	167	156	125	118	145	175	179	152	179	181	158	

Glucose mg/dL

Median

25th to 75th Percentile

5th to 95th Percentiles

Target Range

Assessment:

1.
2.
3.

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SLIDE 13

Case 3 – 8 Month Follow-up

Component	11/16/2021	1/14/2021
A1C, POC 4.0 - 6.0 %	7.8	11.1

Assessment:
T2DM –
1.
2.
3.
4.
5.

Plan:
- **T2DM:**
  1.
  2.
  3.
  4.
  5.
  6.

RTC in 3 months

BBC: Basal-Bolus-Correction insulin; MTF: Metformin

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Case 4 - 42 yo with T2DM on MDI therapy here for f/u

- Did not bring a BG log or meter
- Reports the following perceived BG readings for "several months":
  - FBG: 110-120's range
  - PM pre-meal: 120-150's range

- DM Rx:
  - Insulin Glargine 30 units at HS
  - Insulin Lispro 8 units with meals

- Data: POC A1c: 9.2%

Assessment:
1.
2.
Plan:
1.

HbA1c & Estimated Average BG
5% – 90 mg/dL
6% - 120 mg/dL
7% - 150 mg/dL
8% - 180 mg/dL
9% - 210 mg/dL
10% - 240 mg/dL
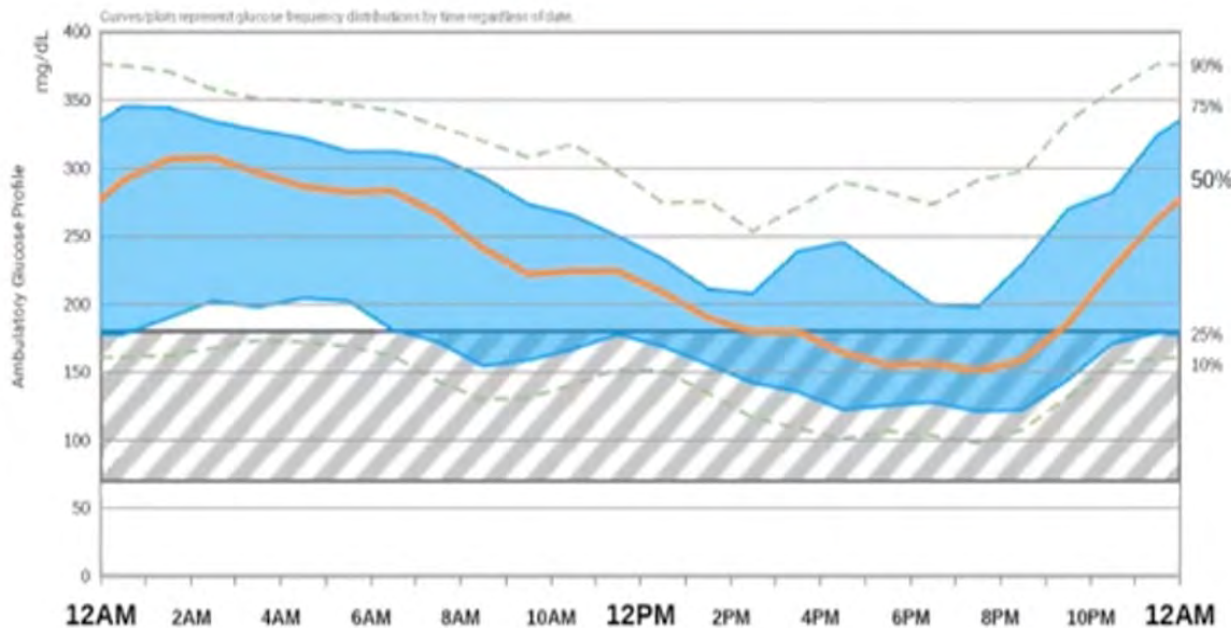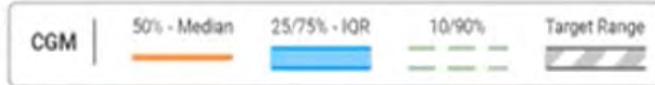11% - 270 mg/dL
12% - 300 mg/dL
13% - 330 mg/dL
14% - 360 mg/dL

FBG: Fasting blood glucose; AGP: Ambulatory Glucose Profile

Case 4 - 42 yo with T2DM returns for Professional CGM review

Fri Sep 10, 2021 - Thu Sep 23, 2021   (13.6 days)

Glucose Statistics	Avg Glucose mg/dL	Very Low >54 mg/dL	Low <70 mg/dL	In Target Range 70-180 mg/dL	High >180 mg/dL	Very High >250 mg/dL	Coefficient of Variation	SD mg/dL	% Time CGM Active
	226 Glucose Exposure	0.0%	0.0%	36.1%	63.9%	37.6%	35.4%	80	95.0% Data Sufficiency
				Glucose Ranges			Glucose Variability		

CGM | 50% - Median | 25/75% - IQR | 10/90% | Target Range

AGP Assessment:
1.
2.
3.
4.

Patterns Assessment:
1.
2.
3.
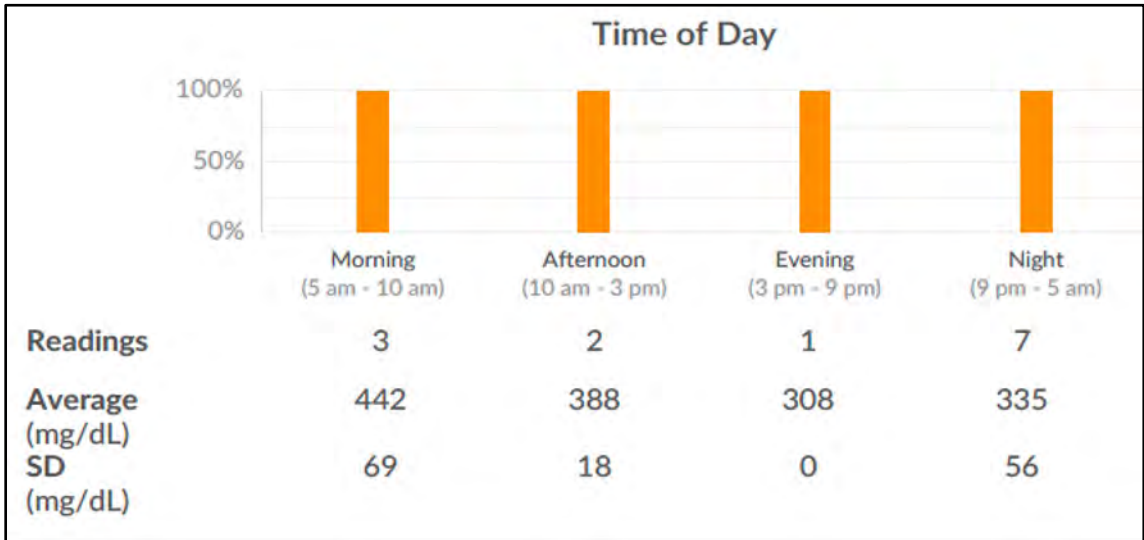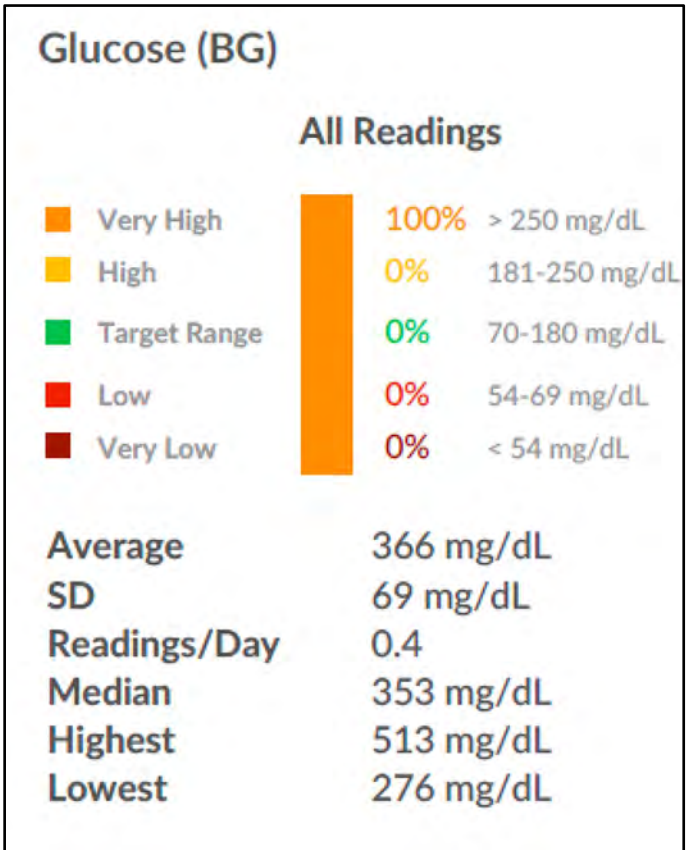**4.**

Plan:
1.
2.

Case 5

- 58 yo with PMH of T2DM (x 3 yrs), Overweight (BMI 26kg/m^2|64 kg) presents for f/u & reports persistent symptomatic hyperglycemia.
- DM Meds:
  - Metformin XR 500mg twice daily before meals
- FamHx: Brother with T1DM
- Data: BG 395 & Udip NEG for ketones
- POC A1c & trends:

Lab Results

Component	Value	Date
HGBA1C	13.8 (H)	11/28/2021
HGBA1C	6.1	09/13/2021
HGBA1C	6.2	03/15/2021
HGBA1C	5.8	09/14/2020

Case 5 – Patient with T2DM & persistent, symptomatic hyperglycemia

Glucose (BG)

All Readings

🟧 Very High	100%	> 250 mg/dL
🟨 High	0%	181-250 mg/dL
🟩 Target Range	0%	70-180 mg/dL
🟥 Low	0%	54-69 mg/dL
🟫 Very Low	0%	< 54 mg/dL

Average	366 mg/dL
SD	69 mg/dL
Readings/Day	0.4
Median	353 mg/dL
Highest	513 mg/dL
Lowest	276 mg/dL

Time of Day

	Morning (5 am - 10 am)	Afternoon (10 am - 3 pm)	Evening (3 pm - 9 pm)	Night (9 pm - 5 am)
Readings	3	2	1	7
Average (mg/dL)	442	388	308	335
SD (mg/dL)	69	18	0	56

Assessment:
1.
2.
3.

Glycemia Report:
Date of Interpretation: 12/3/2021
Data period: 11/20/21-12/3/2021
Readings: _____
Mean BG (mg/dL): _____
Range BG mg/dL): _____
% Hyperglycemia (>180): _____
% at Target (70-180): _____
% Hypoglycemia (<70): _____

Case 5 – Assessment and/or Other Suspicions?

Assessment:

1. _____

       a. A1c trend:

       b. AGP:

       c. Other salient info:

2. Suspicions for etiologies of hyperglycemia:

  a.

  b.

  c.

Case 5 – Plan for Significantly Changed A1c & AGP

Assessment:

1. _____

Plan:

1.

2.

3.

4.

5.

6.

7.

Case 5 –One Month Follow-up via Telehealth

Data:

- POC A1c now 11.3%
- DM Rx: MTF XR 1000mg 2x daily & Lantus 20 units daily (up-titrated between visits)
- BG Meter readings presented by patient:

	Pre-Meals & HS (mg/dL)
Breakfast	232,136,198,183,170, **(Lantus 17->20)**,153,138,108,141
Lunch	205,195,162,198,171,104,215, **(Lantus 17->20)**,141,140,150
Supper	272,200,198, **(Lantus 17->20)**,104,140
Bedtime	272, **(Lantus 17->20)**,162,104,141

- Labs: NL range C-peptide & NEGATIVE auto-antibodies

AGP from BG Readings:

- _____

Assessment:

- _____

Plan:

1.

2.

3.

4.

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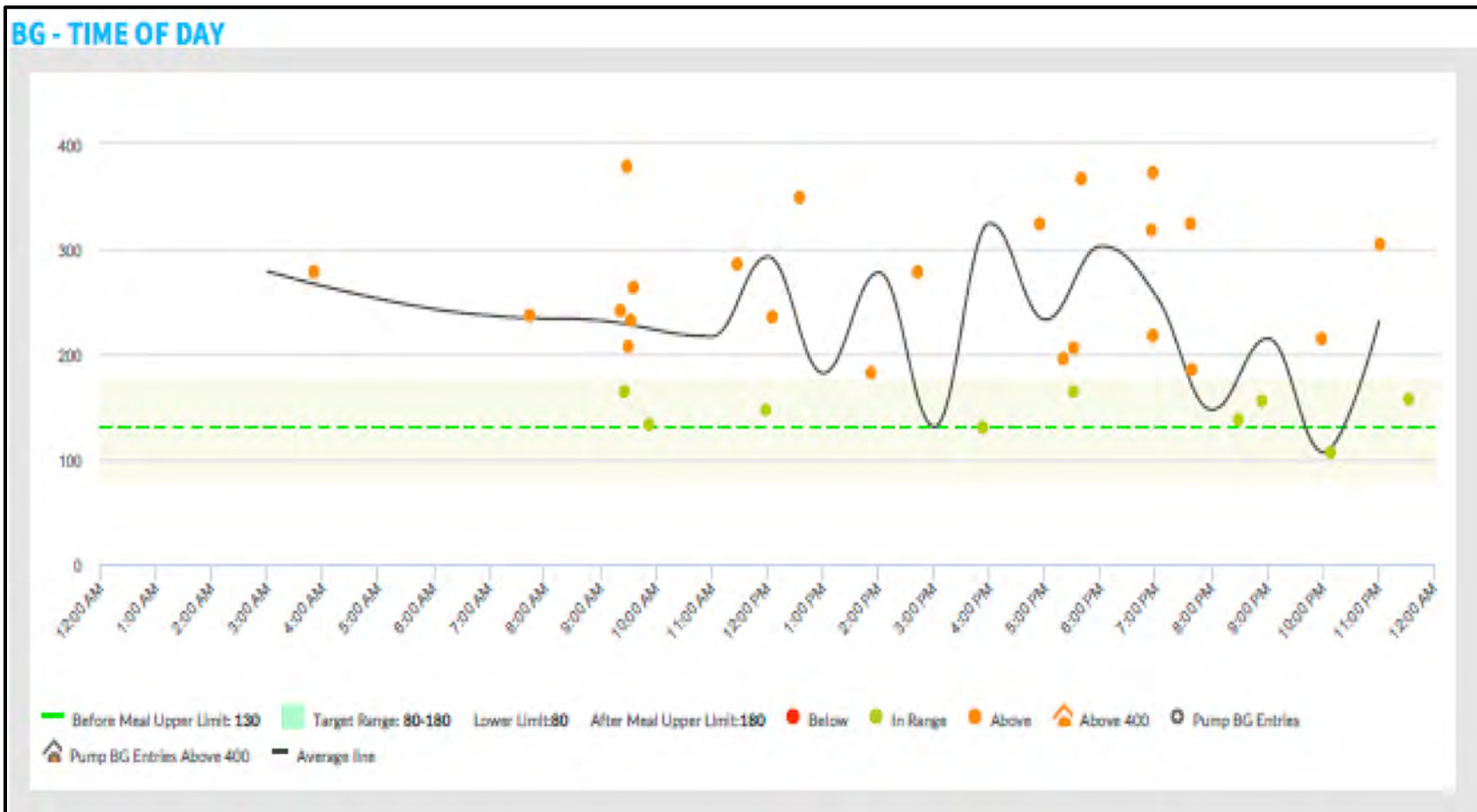THE UNIVERSITY OF
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Case 6

- 62yo with T2DM ('20), NICVD & BMI of 38. Complains she's only lost a few pounds after multiple unsuccessful attempts at lifestyle changes including stricter BG monitoring, activity & diet changes.

- DM Meds:
  - Metformin XR 2000mg twice daily before meals

- Data: A1c trends (A1c drawn ~1 month before visit; Goal of A1c 6-7%):

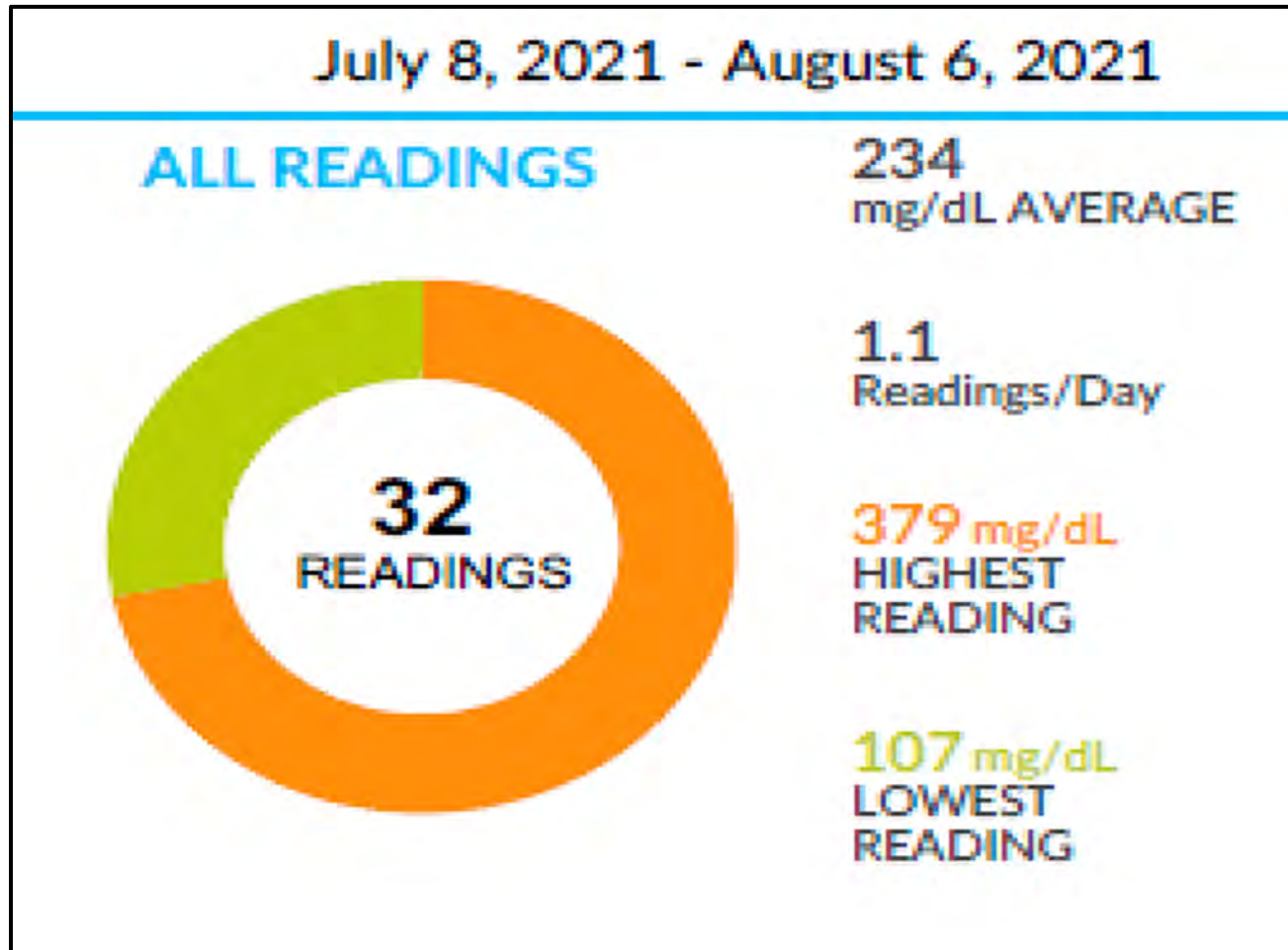**Lab Results**

Component	Value	Date
HGBA1C	7.8	09/15/2021
HGBA1C	7.9	03/10/2021
HGBA1C	7.3	09/02/2020
HGBA1C	7.7 (H)	07/10/2020
HGBA1C	8.3 (H)	04/30/2020
HGBA1C	12.0 (H)	02/10/2020

Case 6 - AGP

AGP: Ambulatory Glucose Profile

Case 6 - AGP

July 8, 2021 - August 6, 2021

ALL READINGS

32 READINGS

234 mg/dL AVERAGE

1.1 Readings/Day

379 mg/dL HIGHEST READING

107 mg/dL LOWEST READING

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AGP: Ambulatory Glucose Profile

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Case 6 - AGP

Glucose (BG)

All Readings

■	Very High	38%	> 250 mg/dL
■	High	34%	181-250 mg/dL
■	Target Range	28%	80-180 mg/dL
■	Low	0%	54-79 mg/dL
■	Very Low	0%	< 54 mg/dL

Average	234 mg/dL
SD	79 mg/dL
Readings/Day	1.1
Median	226 mg/dL
Highest	379 mg/dL
Lowest	107 mg/dL

Time of Day

	Morning (5 am - 10 am)	Afternoon (10 am - 3 pm)	Evening (3 pm - 9 pm)	Night (9 pm - 5 am)
Readings	8	6	13	5
Average (mg/dL)	232	246	239	213
SD (mg/dL)	73	74	90	82

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Physician Associate Program
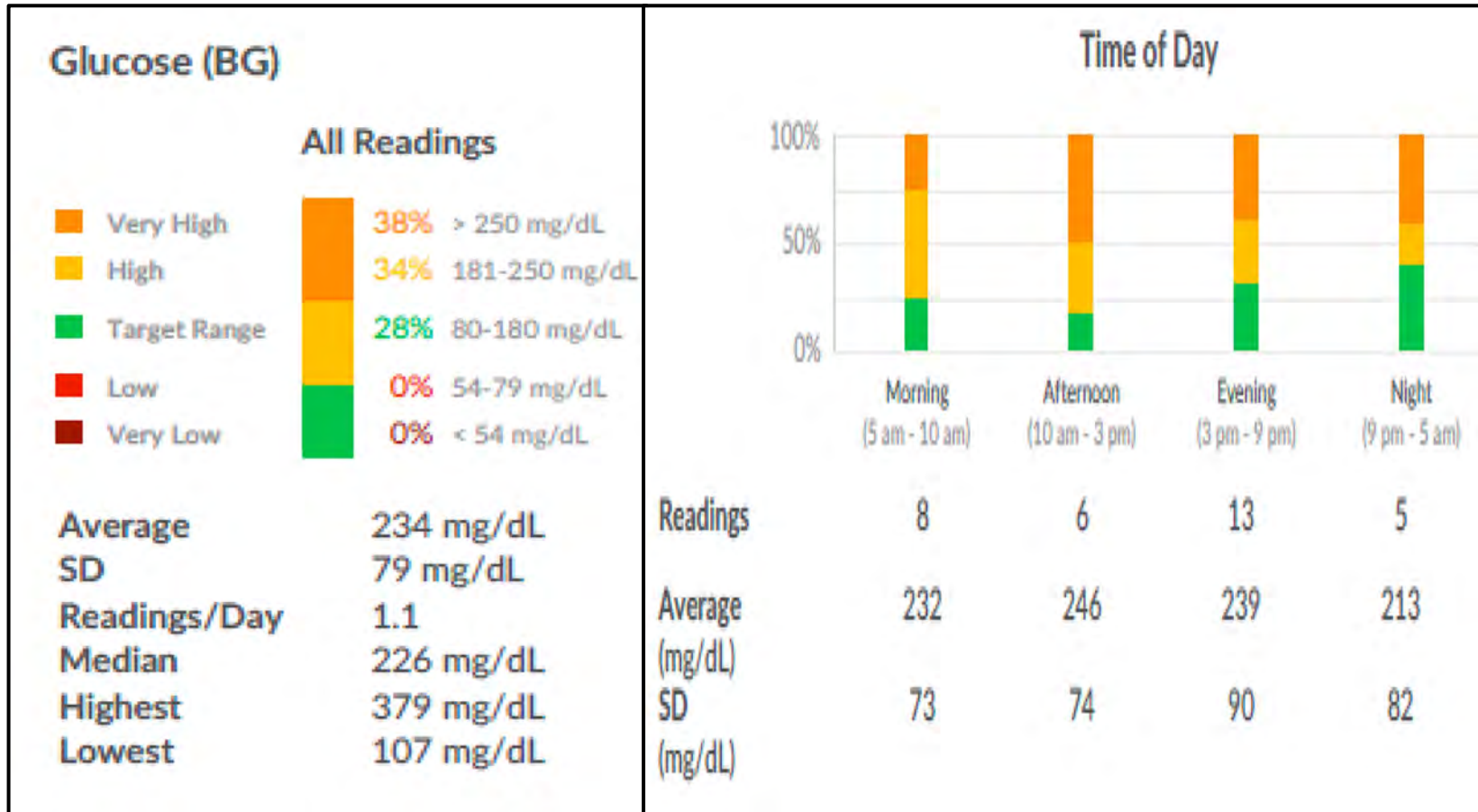
AGP: Ambulatory Glucose Profile

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Case 6 – A/P: Above goal A1c, AGP & weight

Assessment:

Plan:

Case 6 - 3 Month Follow-up

<u>DM Meds:</u>

- Metformin XR 2000mg twice daily before meals
- Ozempic (Semaglutide) 0.5mg sc weekly

<u>Lifestyle Vitals:</u>

- Using smartphone pedometer & averaging 5-7 K steps/day
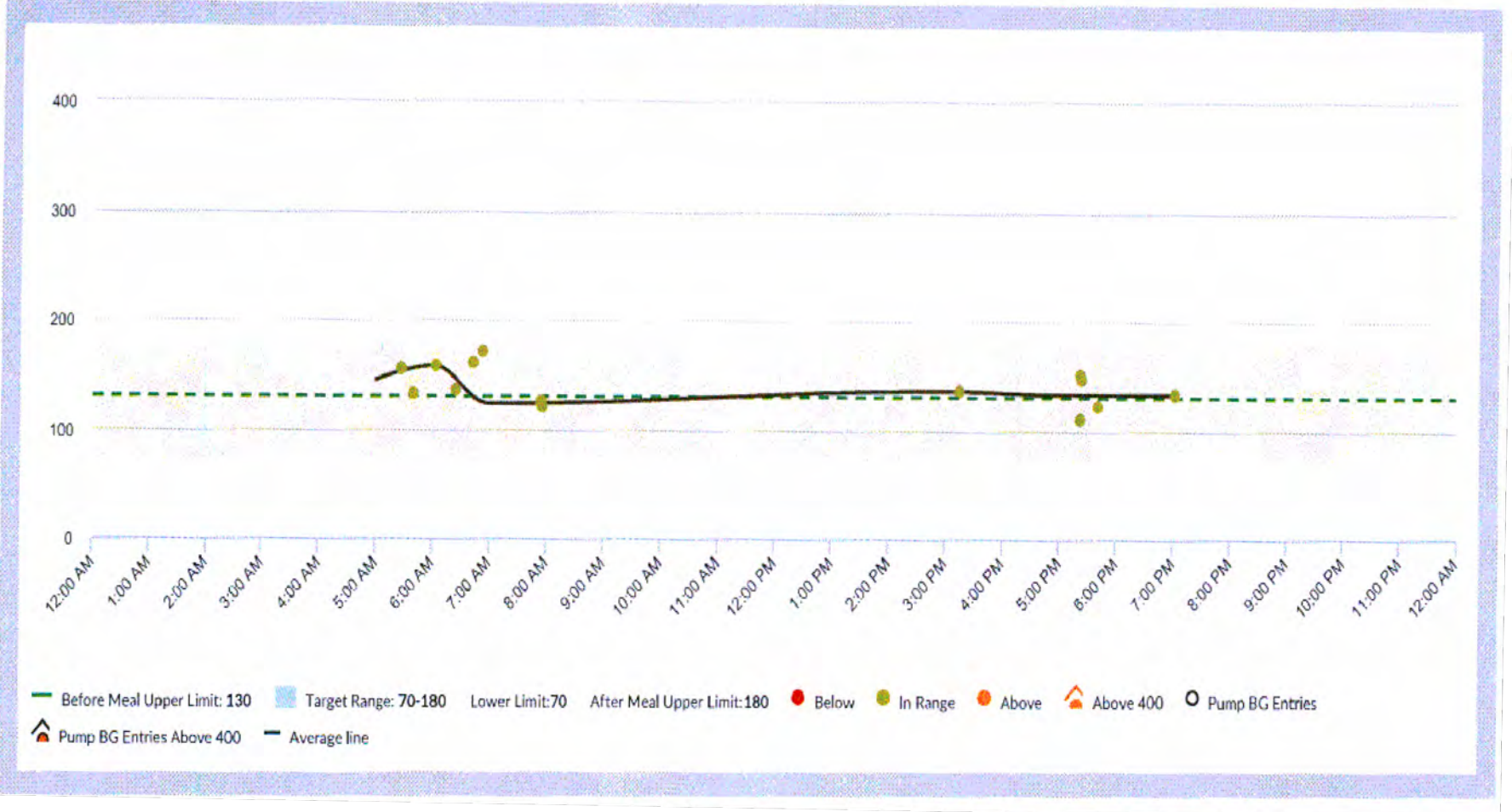- Maintaining small portion sizes & healthier nutrient balance

<u>Data:</u>

- Wt loss 7lbs
- A1c 6.8%

<u>AGP: (see next 3 pages)</u>

Case 6 – AGP: 3 Month Follow-up

AGP: Ambulatory Glucose Profile

Case 6 – AGP: 3 Month Follow-up

ALL READINGS

141 mg/dL AVERAGE

0.5 Readings/Day

172 mg/dL **HIGHEST READING**

111 mg/dL **LOWEST READING**

14 READINGS

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AGP: Ambulatory Glucose Profile

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Case 6 – AGP: 3 Month Follow-up

Glucose (BG)

All Readings

■ Very High	0%	> 250 mg/dL	
■ High	0%	181-250 mg/dL	
■ Target Range	100%	70-180 mg/dL	
■ Low	0%	54-69 mg/dL	
■ Very Low	0%	< 54 mg/dL	

Average	141 mg/dL
SD	18 mg/dL
Readings/Day	0.5
Median	137 mg/dL
Highest	172 mg/dL
Lowest	111 mg/dL

Time of Day
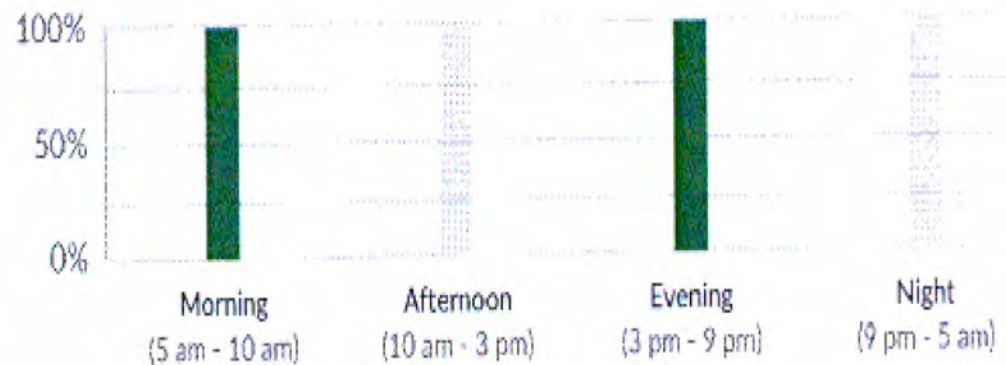
	Morning (5 am - 10 am)	Afternoon (10 am - 3 pm)	Evening (3 pm - 9 pm)	Night (9 pm - 5 am)
Readings	8	-	6	-
Average (mg/dL)	146	-	133	-
SD (mg/dL)	19	-	15	-

AGP: Ambulatory Glucose Profile

Case 6 - 3 Month Follow-up A/P Summary

DM Meds:

- Metformin XR 2000mg twice daily before meals
- Semaglutide 0.5mg sc weekly

Lifestyle Vitals:

- Using smartphone pedometer & averaging 5-7 K steps/day
- Maintaining small portion sizes & healthier nutrient balance

Data:

- Wt loss: 7lbs
- A1c 6.8% & AGP 100% TIR with checking BG 2x/day

Assessment: _____

Plan:

1.
2.
3.
4.
5.

HPI:

Complains of a warm & itchy rash at CGM site x 1 week. The infusion set was only used for 10 days "as usual". Area started as an itchy area followed by a red rash. Patient denies tenderness, increased warmth or d/c.

On exam, you observe this:

What is most likely reason for rash?

A. Allergic reaction to CGM adhesive

B. Fungal infection

C. Dermatographia

D. Cellulitis

60 yo with PMH of T2DM, CAD s/p MI (2015), HLD, COPD, Anxiety/Depression & smoker presents for DM f/u.

Meds:
- STOPPED Trulicity 0.75mg weekly --> patient stopped Rx 2 mos ago because of "pain all over my body"
- STOPPED Metformin 1000mg BID --> patient stopped Rx 2 mos ago because of "pain all over my body"

-Lantus 12units at 8PM --> patient self-decreased from 16u to 12u (no reason offered)
-Novolog (FOOD insulin) by sliding scale with <u>BREAKFAST & LUNCH</u>
  If your blood sugar (BS) is < 100, eat your meal (no insulin)
  If your BS 100-200, take 6 units
  If your BS 201-300, take 8 units
  If your BS 301-400, take 10 units
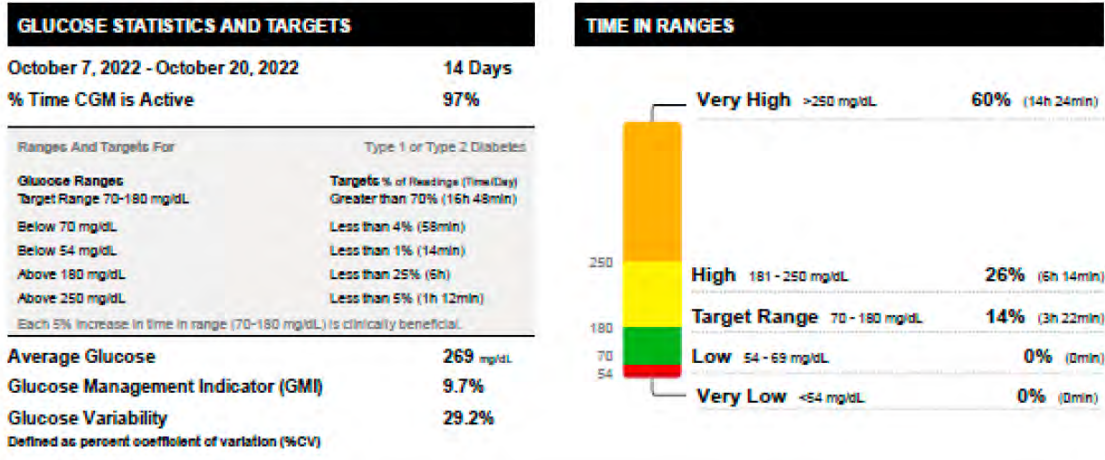 **If your BS > 400, take 12 units**

-Novolog (FOOD insulin) by sliding scale with <u>DINNER</u>
  If your blood sugar (BS) is < 100, eat your meal (no insulin)
  If your BS 100-200, take 8 units
  If your BS 201-300, take 9 units
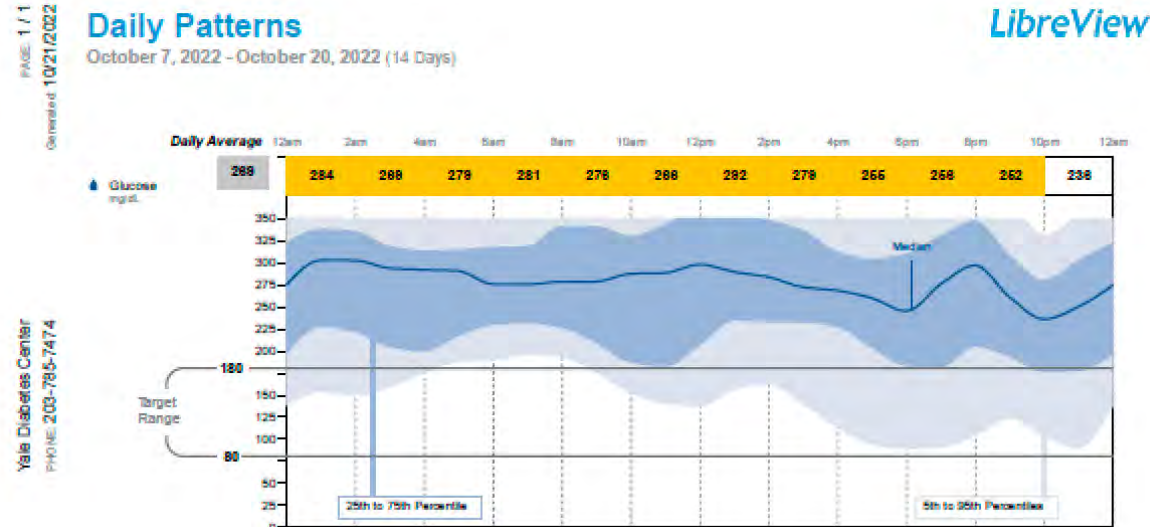 **If your BS 301-400, take 11 units**
  If your BS > 400, take 12 units

AGP Report
October 7, 2022 - October 20, 2022 (14 Days)

LibreView

GLUCOSE STATISTICS AND TARGETS

October 7, 2022 - October 20, 2022   14 Days
% Time CGM is Active   97%

Ranges And Targets For	Type 1 or Type 2 Diabetes
Glucose Ranges / Target Range 70-180 mg/dL	Targets % of Readings (Time/Day) / 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	269 mg/dL
Glucose Management Indicator (GMI)	9.7%
Glucose Variability	29.2%

Defined as percent coefficient of variation (%CV)

TIME IN RANGES

Very High >250 mg/dL	60% (14h 24min)
High 181 - 250 mg/dL	26% (6h 14min)
Target Range 70 - 180 mg/dL	14% (3h 22min)
Low 54 - 69 mg/dL	0% (0min)
Very Low <54 mg/dL	0% (0min)

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 Patterns
October 7, 2022 - October 20, 2022 (14 Days)

LibreView

PAGE 1/1   Generated 10/21/2022

Daily Average	12am	2am	4am	6am	8am	10am	12pm	2pm	4pm	6pm	8pm	10pm	12am
269	284	288	279	281	278	288	282	279	255	268	262	238	

Glucose mg/dL

Yale Diabetes Center   PHONE 203-785-7474

CGM Data Report:

Date of Interpretation: 10/20/2022
Data period: 10/7/22-10/20/2022
Sensor active: _____%
Mean BG (mg/dL): _____
% Hyperglycemia (>180): _____%
% at Target (70-180): _____%
% Hypoglycemia (<70): _____%

Average BG (mg/dL) values by meals:
AC Brkfast (AM Fasting): _____
AC Lunch: _____
AC Dinner: _____
HS: _____

Pertinent Labs:
Lab Results

Component	Value	Date
HGBA1C	10.8	10/21/2022
HGBA1C	10.6	07/18/2022
HGBA1C	11.4	06/17/2022
HGBA1C	10.0 (H)	05/04/2020
HGBA1C	10.6 (H)	03/05/2019
HGBA1C	11.4 (H)	10/03/2018

A/P: T2DM - _____

1. _____

2. _____

3. _____

4. _____

3-month follow-up
DM Rx:
-Did not start Trulicity 0.75mg weekly
-Lantus 14 units at 8PM
-Novolog (FOOD insulin) by sliding scale with <u>BREAKFAST & LUNCH</u> → using pre-meal ~75% of time
    If your blood sugar (BS) is < 100, eat your meal (no insulin)
    If your BS 100-200, take 6 units humalog
    If your BS 201-300, take 8 units humalog
    If your BS 301-400, take 10 units humalog
    If your BS > 400, take 12 units humalog

-Novolog (FOOD insulin) by sliding scale with <u>DINNER</u> → using pre-meal ~25% of time
    If your blood sugar (BS) is < 100, eat your meal (no insulin)
    If your BS 100-200, take 8 units novolog
    If your BS 201-300, take 9 units novolog
    If your BS 301-400, take 11 units novolog
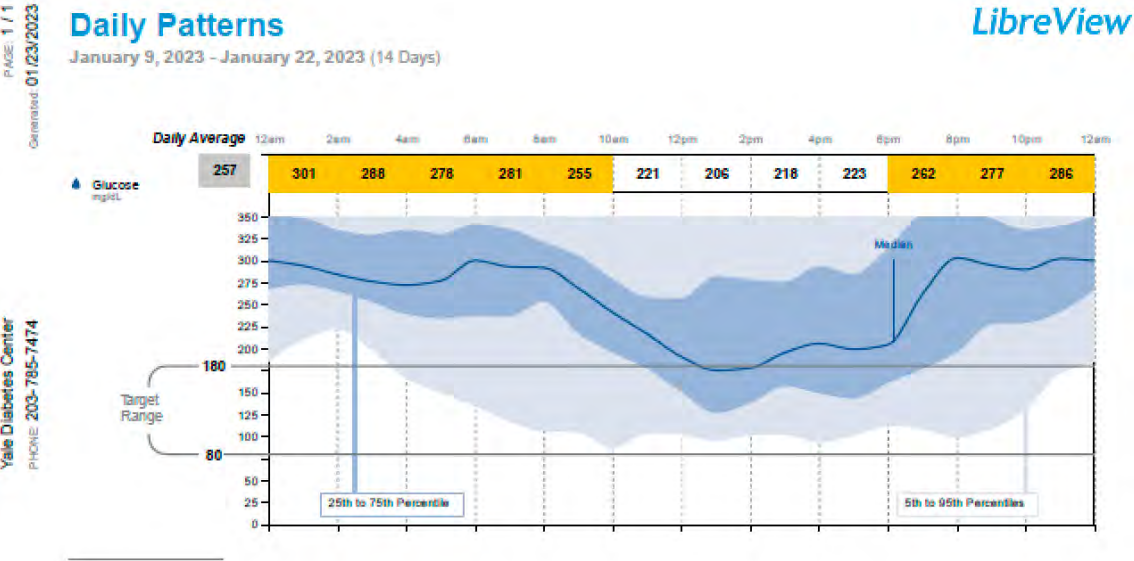   If your BS > 400, take 12 units novolog

GLUCOSE STATISTICS AND TARGETS

January 9, 2023 - January 22, 2023	14 Days
% Time CGM is Active	95%

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)

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

Average Glucose	257 mg/dL
Glucose Management Indicator (GMI)	9.5%
Glucose Variability	33.2%

Defined as percent coefficient of variation (%CV)

TIME IN RANGES

Very High	>250 mg/dL	55%	(13h 12min)
High	181 - 250 mg/dL	24%	(5h 46min)
Target Range	70 - 180 mg/dL	21%	(5h 2min)
Low	54 - 69 mg/dL	0%	(0min)
Very Low	<54 mg/dL	0%	(0min)

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 Patterns   *LibreView*
January 9, 2023 - January 22, 2023 (14 Days)

Yale Diabetes Center   PHONE: 203-785-7474

Daily Average	12am	2am	4am	6am	8am	10am	12pm	2pm	4pm	6pm	8pm	10pm	12am
257	301	288	278	281	255	221	206	218	223	262	277	286	

CGM Data Report:

Date of Interpretation:	1/22/2023	
Data period:	1/9/23-1/22/2023	Previous:
Sensor active:	_____%	_____%
Mean BG (mg/dL):	_____	_____
% Hyperglycemia (>180):	_____%	_____%
% at Target (70-180):	_____%	_____%
% Hypoglycemia (<70):	_____%	_____%

Average BG (mg/dL) values by meals:

AC Brkfast (AM Fasting):	_____	_____
AC Lunch:	_____	_____
AC Dinner:	_____	_____
HS:	_____	_____

A1c trend:
Pertinent Labs:
Lab Results

Component	Value	Date
HGBA1C	11.1	01/23/2023
HGBA1C	10.8	10/21/2022
HGBA1C	10.0 (H)	05/04/2020
HGBA1C	10.6 (H)	03/05/2019
HGBA1C	11.4 (H)	10/03/2018

A/P: _____

_____

_____

Recommendations:

1. _____

2. _____

3. _____

4. _____

CASE #8 F/U #2

60 yo with PMH of T2DM, CAD s/p MI (2015), HLD, COPD, Anxiety/Depression & smoker (current 1/2 ppd) presents for DM f/u.
3-month follow-up
DM Rx:
-Trulicity 0.75mg weekly
-Lantus 16units at 8PM
-Novolog (FOOD insulin) 5 units with BREAKFAST & LUNCH
-Novolog (FOOD insulin) 9 units with DINNER
        -If your blood sugar is >250 before you eat, add 2 units to this dose

AGP Report
April 8, 2023 - April 21, 2023 (14 Days)   **LibreView**

GLUCOSE STATISTICS AND TARGETS

April 8, 2023 - April 21, 2023   **14 Days**
Time CGM Active: **35%**

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)

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

Average Glucose	**196** mg/dL
Glucose Management Indicator (GMI)	**8.0%**
Glucose Variability	**34.0%**

Defined as percent coefficient of variation (%CV)

TIME IN RANGES

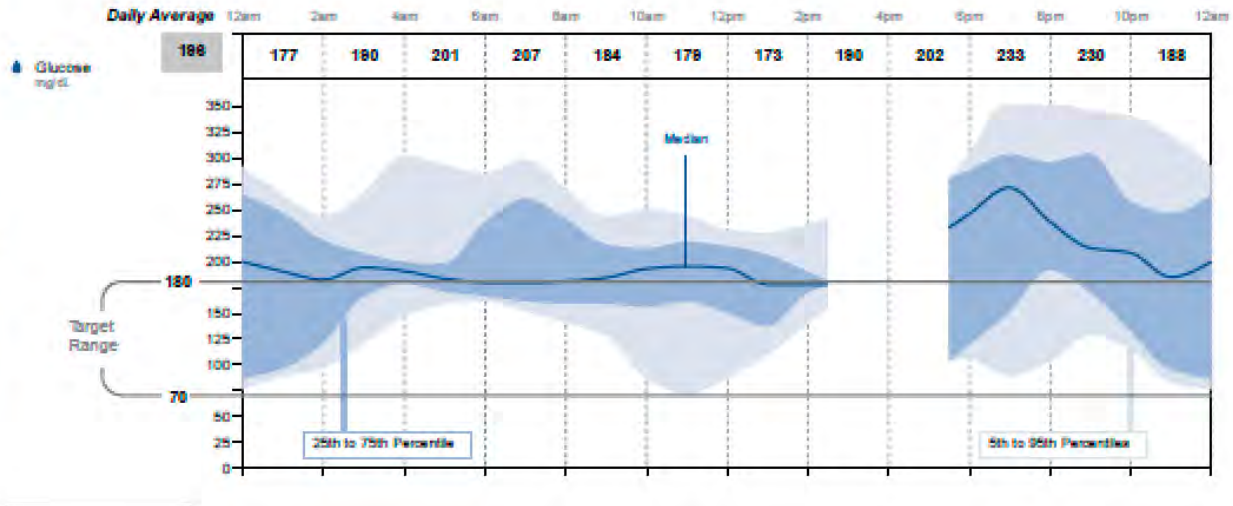|		
Very High >250 mg/dL	**21%**	(5h 2min)
High 181 - 250 mg/dL	**38%**	(9h 7min)
Target Range 70 - 180 mg/dL	**40%**	(9h 37min)
Low 54 - 69 mg/dL	**1%**	(14min)
Very Low <54 mg/dL	**0%**	(0min)

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 Patterns

April 8, 2023 - April 21, 2023 (14 Days)

LibreView

Yale Diabetes Center
PHONE 203-785-7474

Daily Average	12am	2am	4am	6am	8am	10am	12pm	2pm	4pm	6pm	8pm	10pm	12am
188	177	180	201	207	184	179	173	180	202	233	230	188

Why do I have a gap in my data?_____

CGM Data Report:

Date of Interpretation:	4/21/2023	
Data period:	4/8/23-4/21/2023	**Previous:**
Sensor active:	_____%	95%
Mean BG (mg/dL):	_____	257
% Hyperglycemia (>180):	_____%	79%
% at Target (70-180):	_____%	21%
% Hypoglycemia (<70):	_____%	0%

Average BG (mg/dL) values by meals:

AC Brkfast (AM Fasting):	_____	276
AC Lunch:	_____	292
AC Dinner:	_____	256
HS:	_____	236

A1c trend:
Pertinent Labs:
Lab Results

Component	Value	Date
HGBA1C	9.5	04/21/2023
HGBA1C	11.1	01/23/2023
HGBA1C	10.8	10/21/2022
HGBA1C	10.0 (H)	05/04/2020
HGBA1C	10.6 (H)	03/05/2019
HGBA1C	11.4 (H)	10/03/2018

A/P: _____

_____

_____

_____

Plan:

<u>Medication Planning</u>

1. _____

2. _____

3. _____

4. _____

49 yoM with PMH of Brain AVMs s/p Cyber-knife interventions (2010), CAD s/p cath x 2, CVA (ischemic 2019), HLD, HTN, chronic pain syndrome, smoker (1ppd) & poorly controlled T2DM (Hx A1c 7.1-10.8%) presents for DM f/u. Last seen by this provider in Oct '22.

DM Rx:
*STOPPED Ozempic 0.25mg ~2 months ago --> "I didn't feel like it was working."
-Jardiance 25 mg daily in AM
-Tresiba 40 units daily in AM
-Novolog pre-meal insulin (Food insulin)
  ○ **10 units for breakfast PLUS "BG correction"**
  ○ **10 units for lunch PLUS "BG correction"**
  ○ **12 units for dinner PLUS "BG correction"**
-Novolog BG correction scale: (Correction insulin)
- **1u for 150-199**
- **2u for 200-249**
- **3u for 250-299**
- **4u for 300-349**
- **5u for 350-399**
- **6u for 400 or higher & CALL the YDC at 203-785-7474**

SMBG:
-Checks BG 4-6X/day via Libre CGM.
-**LibreView account shared with YDC, however, patient has not uploaded recent CGM data to account.**
-Hypos: Reports 1-2 hypos to 60's in AMs after PM meal BG correction - endorses not following BG correction scale. Denies a frequent pattern.
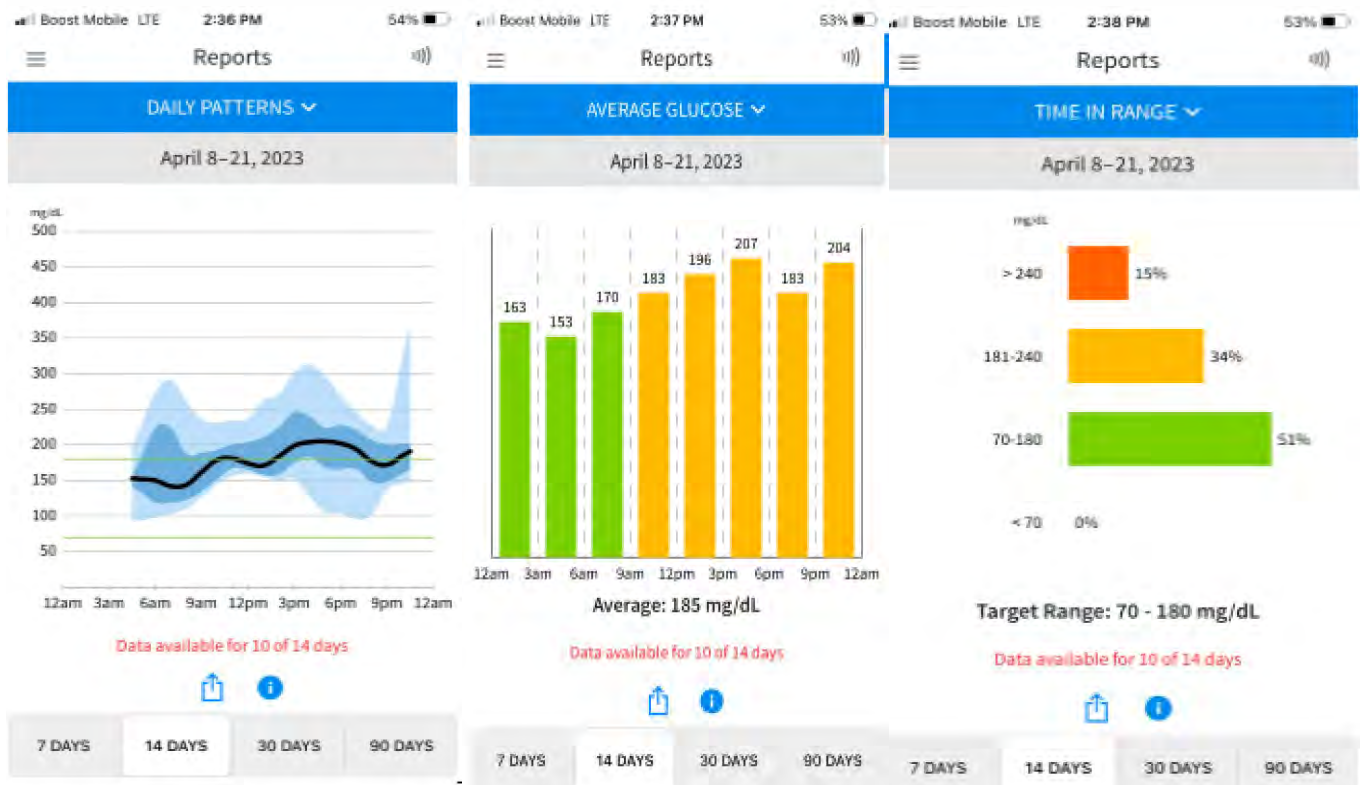
CGM Data Report:
Date of Interpretation: **4/21/2023**
Data period: _____   **Previous:**
Mean BG (mg/dL):   _____   **167**
% Hyperglycemia (>180):   _____%   **32%**
% at Target (70-180):   _____%   **67%**
% Hypoglycemia (<70):   _____%   **<1%**

Average BG (mg/dL) values by meals:
AC Breakfast (FBG):   _____   **161**
AC Lunch: _____   **170**
AC Dinner: _____   **183**
HS: _____   **162**

A/P: _____

_____

_____

_____

Plan:
  Medication Planning
1.

2.

3.

4.

5.

67 yoF with a PMH of T1DM, CAD, MI s/p CABG, HTN, Stage 3 CKD, Asthma, PVD, Thyroid nodule & Depression presents for DM f/u appt in Dec '22. Reports giving bolus insulin for highs without following the specific sliding scale & that she is inconsistent pre-meal boluses.
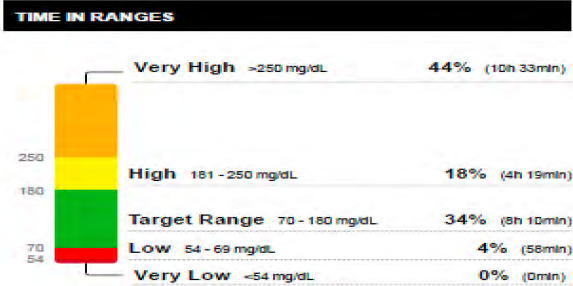
DM Rx:
-Tresiba 26 units once daily at night
-Humalog "meal-size" dosing (below) PLUS ADDED "BG Correction"
- 5 units for "small" meal with carbs (20-30gm)
- 6 units for "medium" meal with carbs (31-40gm)
- 7 units for "large" meal with carbs (41-60gm)
-Humalog "BG Correction" scale below:
- If blood sugar is less than 200, no added Humalog
- If blood sugar is 200-249, add 1 unit
- If blood sugar is 250-299, add 2 units
- If blood sugar is 300-350, add 3 units

AGP Report
November 19, 2022 - December 2, 2022 (14 Days)

LibreView

GLUCOSE STATISTICS AND TARGETS

November 19, 2022 - December 2, 2022	14 Days
% Time CGM is Active	88%

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)

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

Average Glucose	219 mg/dL
Glucose Management Indicator (GMI)	8.5%
Glucose Variability	43.6%

Defined as percent coefficient of variation (%CV)

TIME IN RANGES

Very High >250 mg/dL	44% (10h 33min)
High 181 - 250 mg/dL	18% (4h 19min)
Target Range 70 - 180 mg/dL	34% (8h 10min)
Low 54 - 69 mg/dL	4% (58min)
Very Low <54 mg/dL	0% (0min)

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 Patterns
November 19, 2022 - December 2, 2022 (14 Days)

LibreView

PAGE: 1/1
Generated: 12/02/2022

Yale Diabetes Center
PHONE 203-785-7474

Daily Average	12am	2am	4am	6am	8am	10am	12pm	2pm	4pm	6pm	8pm	10pm	12am
219	234	225	222	222	229	213	133	170	246	258	257	265	

CGM Data Report:
Date of Interpretation:	_____
Data period:	_____
Sensor active:	_____ %
Mean BG (mg/dL):	_____
% Hyperglycemia (>180):	_____ %
% at Target (70-180):	_____ %
% Hypoglycemia (<70):	_____ %

Average BG (mg/dL) values by meals:
AC Breakfast (FBG):	_____
AC Lunch:	_____
AC Dinner:	_____
HS:	_____

Pertinent Labs:

Lab Results

Component	Value	Date
HGBA1C	9.2	12/02/2022
HGBA1C	8.7 (H)	10/28/2022
HGBA1C	9.2 (H)	01/26/2022
HGBA1C	9.2 (H)	08/26/2021
HGBA1C	8.7 (H)	05/26/2021

A/P: _____

_____

_____

_____

Plan:

Medication Planning

1.

2.

3.

Case #10 F/U

<mark>67 yoF with a PMH of T1DM, CAD, MI s/p CABG, HTN, Stage 3 CKD, Asthma, PVD, Thyroid nodule & Depression presents for DM f/u appt in Dec '22. Patient reports increasing her pre-noon & pre-PM meal boluses on her own.</mark>

DM Rx:

-Tresiba 28 units once daily at night

-Humalog "meal-size" dosing (below) PLUS ADDED "BG Correction"

- 5 units for "small" meal with carbs (20-30gm)
- 7 units for "medium" meal with carbs (31-40gm)
- 9 units for "large" meal with carbs (41-60gm)

AGP Report

March 30, 2023 - April 12, 2023 (14 Days)

LibreView

GLUCOSE STATISTICS AND TARGETS

March 30, 2023 - April 12, 2023	14 Days
Time CGM Active:	88%

Ranges And Targets For	Type 1 or Type 2 Diabetes
Glucose Ranges Target Range 70-180 mg/dL	Targets % of Readings (Time/Day) 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	173 mg/dL
Glucose Management Indicator (GMI)	7.4%
Glucose Variability	33.6%

Defined as percent coefficient of variation (%CV)

TIME IN RANGES

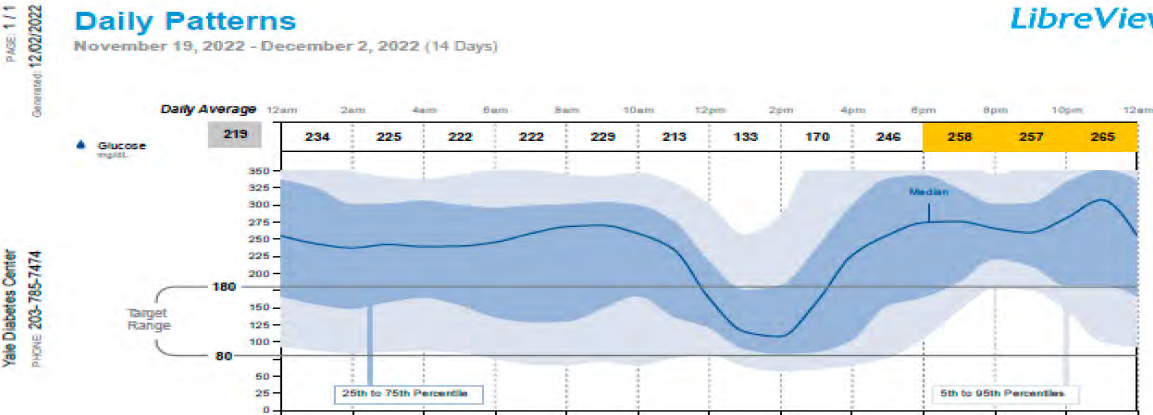|		
Very High >250 mg/dL	9%	(2h 10min)
High 181 - 250 mg/dL	34%	(8h 10min)
Target Range 70 - 180 mg/dL	53%	(12h 42min)
Low 54 - 69 mg/dL	4%	(58min)
Very Low <54 mg/dL	0%	(0min)

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 Patterns

March 30, 2023 - April 12, 2023 (14 Days)
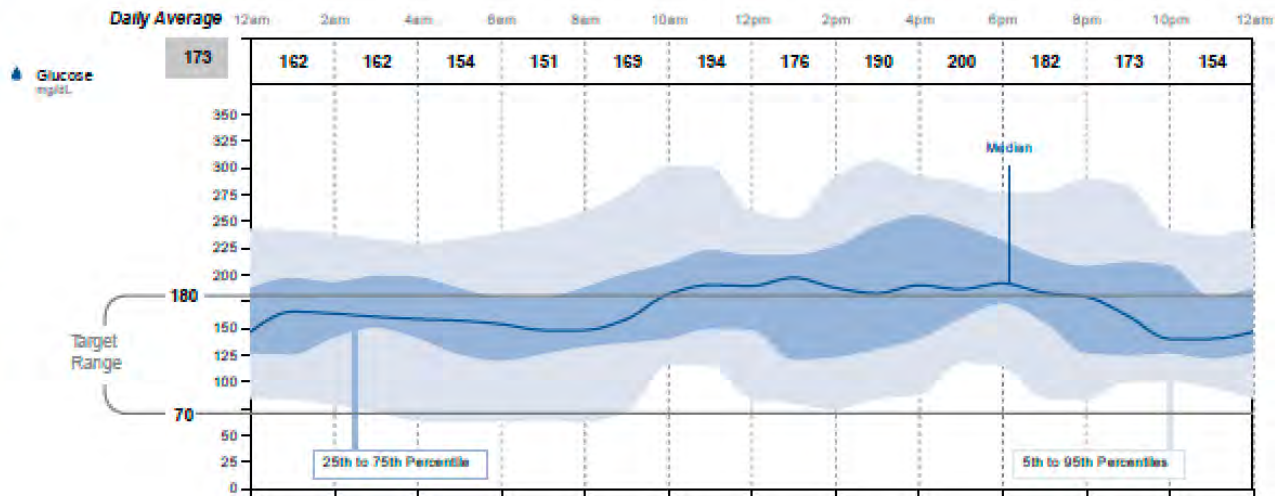
LibreView

Daily Average	12am	2am	4am	6am	8am	10am	12pm	2pm	4pm	6pm	8pm	10pm	12am
Glucose mg/dL	173	162	162	154	151	169	194	176	190	200	182	173	154

CGM Data Report:

Date of Interpretation:	4/12/2023		
Data period:	3/30/23-4/12/2023	**Previous visit:**	
Sensor Activity	_____%	88%	
Mean BG (mg/dL):	_____	219	
GMI:	_____%	8.5%	
% Hyperglycemia (>180):	_____%	62%	
% at Target (70-180):	_____%	34%	
% Hypoglycemia (<70):	_____%	4%	

Average BG (mg/dL) values by meals: **Previous visit:**

AC Brkfast (AM Fasting):	_____	229
AC Lunch:	_____	133
AC Dinner:	_____	258
HS:	_____	265

Pertinent Labs:

Lab Results

Component	Value	Date
HGBA1C	8.9	04/12/2023
HGBA1C	8.7 (H)	03/18/2023
HGBA1C	11.1	01/11/2023
HGBA1C	9.2	12/02/2022
HGBA1C	8.7 (H)	10/28/2022
HGBA1C	9.2 (H)	01/26/2022
HGBA1C	9.2 (H)	08/26/2021
HGBA1C	8.7 (H)	05/26/2021

A/P: _____

Plan:
  <u>Medication Planning</u>

1.

2.

3.

4.

5.

59 yoM with a PMH of with T2DM, CAD, s/p MI, s/p CABG ('19), HTN, HLD, CKD-Stage 2 presents from STR facility for New Patient appointment. D/C'd from hospital to STR in May '22 on the following diabetes meds.

HPI: Meals: Breakfast is highest carb portion & biggest meal of the day

DM Rx:

-Linaglipitin 5mg daily (DPP4i)

-Insulin Detemir 46 units before AM meal & 20 units before PM meal (Basal insulin)

-Insulin lispro pre-meal dosing PLUS low-dose BG Correction (1 unit / 50md/dL > 150) (Bolus insulin)

1. **7 units for breakfast**
2. **5 units for lunch**
3. **5 units for dinner**

Labs: **A1c 8.9%**

Examples of "3-minute Drill" **July 2022**

DATE RANGE: 7/12 - 7/19 TO _____

DAY	Fasting AM	XX	Noon meal	XX	PM Meal	XX	Bedtime	XX
1 7/12	252	④	192	②	221	③	163 ✓	
2 7/13	227	③	294	④	214	③	122 ✓	
3 7/14	183	②	228	③	214	③	155 ✓	
4 7/15	152 ✓	②	221	③	152 ✓	②	105 ✓	
5 7/16	215	③	206	③	193	②	196	
6 7/17	241	③	248	③	159 ✓	②	143 ✓	
7 7/18	209	③	192	②	127 ✓		127 ✓	
8 7/19	194	②	246	③				

BGM Data Report:

Date of Interpretation: _____

Data period: _____

Mean BG (mg/dL): _____

% Hyperglycemia (>180): _____%

% at Target (70-180): _____%

% Hypoglycemia (<70): _____%

Average BG (mg/dL) values by meals:

AC Breakfast (FBG): _____

AC Lunch: _____

AC Dinner: _____

HS: _____

A/P:

Plan:

1.

2.

3.

4.

5.

6.

DM Rx:
-Dulaglutide 0.75mg weekly
- Insulin Glargine 60 units at HS
  1. 9 units for breakfast
  2. 5 units for lunch
  3. 5 units for dinner

Labs: **A1c 7.6%**

Examples of "3-minute Drill"   **Sept 2022**

DATE RANGE: 9/9/22 - 9/21/22 TO _____

DAY	Fasting AM	XX	Noon meal	XX	PM Meal	XX	Bedtime	XX
1 9/9	213		181		173		161	
2 10	218		192		208		143	
3 11	195		213		132		138	
4 12	133		127		102		144	
5 13	181		196		170		151	
6 14	102		166		145		169	
7 15	166		93		141		155	
8 16	149		196		134		129	
9 17	179		167		151		116	
10 18	154		136		146		102	
11 19	195		130		116		99	
12 20	196		225		151		108	
13 21	183		182					

BGM Data Report:

Date of Interpretation:	_____		**Previous:**
Data period:	_____		**7/12/22-7/19/22**
Mean BG (mg/dL):	_____		_____
% Hyperglycemia (>180):	_____%		_____%
% at Target (70-180):	_____%		_____%
% Hypoglycemia (<70):	_____%		_____%

Average BG (mg/dL) values by meals:

AC Breakfast (FBG):	_____		_____
AC Lunch:	_____		_____
AC Dinner:	_____		_____
HS:	_____		_____

A/P:

Plan:
1.

2.

3.

DM Rx:
1. **Dulaglutide 1.5mg weekly**
2. **Insulin glargine 54 units at HS**
3. **Insulin lispro (bolus)**
   a. **AM meal: 8 units**
   b. **Noon meal: 4 units**
   c. **PM meal: 4 units**

Labs: **A1c 6.8%**

Examples of "3-minute Drill"   **Oct 2022**

DATE RANGE: 10/17 TO 10/31

DAY	Fasting AM	xx	Noon meal	xx	PM Meal	xx	Bedtime	xx
1	80		70					
2	130		151		153		146	
3	114		146		160		162	
4	135		147		107		153	
5	150		182		133		164	
6	195		199		165		89	
7	155		171		178		120	
8	176		189		129		176	
9	146		195		130		170	
10	179		197		103		104	
11	193		169		124		157	
12	179		186		194		113	
13	166		159		148		149	
14	125		130		167		151	
15	155		166		147		144	
16	163		154		186		156	

BGM Data Report:
Date of Interpretation: _____   Previous:
Data period: _____   9/9/22-9/21/22
Mean BG (mg/dL):   _____   _____
% Hyperglycemia (>180): _____ %   _____ %
% at Target (70-180):   _____ %   _____ %
% Hypoglycemia (<70):   _____ %   _____ %

Average BG (mg/dL) values by meals:
AC Breakfast (FBG):   _____   _____
AC Lunch: _____   _____
AC Dinner: _____   _____
HS: _____   _____

A/P:

Plan:
1.

2.

3.

4.

5.

31 DAY BLOOD GLUCOSE TESTING LOG – Mealtimes = PRE-MEAL (BEFORE EATING)

NAME:_____ DOB:_____

DATE RANGE: _____ TO _____

DAY	Fasting AM	xx	Noon meal	xx	PM Meal	xx	Bedtime	xx
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								

BGM Data Report:
Date of Interpretation: _____
Data period: _____
Mean BG (mg/dL): _____
% Hyperglycemia (>180): _____%
% at Target (70-180): _____%
% Hypoglycemia (<70): _____%

Average BG (mg/dL) values by meals:
AC Breakfast (FBG): _____
AC Lunch: _____
AC Dinner: _____
HS: _____