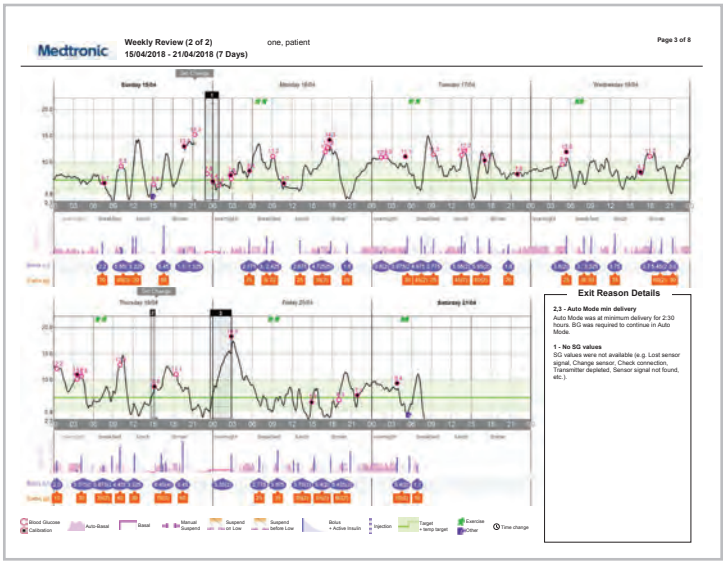
INTERPRETING AUTO MODE CARELINK™ REPORTS

Weekly Review Report

Provides a review of each day's glucose tracing, insulin delivery (basal and bolus) and carbs entered for meals and snacks (within a 3-hour time-block). Each page contains up to one week of data.



Use to:

1) Assess glycaemia, behaviour and technology issues (i.e., post-meal highs, lows, frequent exits, going to bed high, waking up high)

2) Identify the cause of issues (i.e., ICR needs to be adjusted, bolus given post-meal, missed correction bolus, missed calibration, etc.)

Assess data across the days (left to right) and identify issues (i.e., high post-meal followed by a low). Look at the events that preceded the issue and could have caused the problem (i.e., bolused post-meal).

Below are common issues seen on Weekly Review Reports and their potential causes.

- **Post-meal highs or lows:** Assess ICR, missed bolus, timing of bolus and carb counting. Emphasise importance of bolusing before eating, unless managing a low or glucose is low at start of meal.
- **Overnight highs:** Assess for high bedtime glucose, inadequate ICR or bolus for dinner or bedtime snack, inaccurate carb counting, not giving recommended bolus or not bolusing for bedtime snack.
- **Overnight lows:** Assess for low bedtime glucose, phantom carbs, exercise, too much correction dose or inadequate ICR with bedtime snack.
- **Morning highs:** Assess for overnight / bedtime highs first, bedtime snack with inadequate or no bolus, morning caffeine. If issue is identified as dawn phenomenon, have patient test BG, take recommended correction dose and bolus for breakfast at least 15-20 minutes before eating.
- **Post-correction lows:** Assess changes in exercise, medications (i.e., stopped steroids) and AIT. If AIT is too short, it can cause insulin stacking that results in lows (typical AIT setting is 3-4 hours).
- **Post-correction highs:** Assess changes in medication (i.e., steroids) and TDD. If TDD is inadequate (usually caused by inconsistent bolusing), correction boluses may not lower glucose to target.

Correction Doses and Active Insulin Time:

- **Correction boluses** are only calculated if a BG is > 8.3 mmol/L.
- **AIT** impacts correction dose amounts ONLY if there is active insulin remaining from a previous bolus. AIT rarely needs to be adjusted from the suggested 3 to 4 hour initial Auto Mode setting.

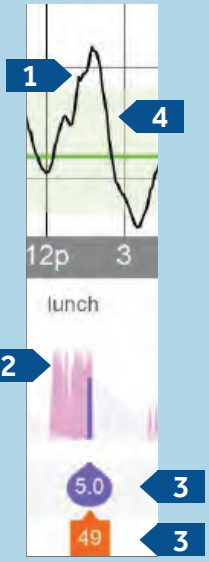
Weekly Review Report (continued)

Illustrations of glycaemic and behaviour issues commonly seen on Weekly Review Reports.

Issue: Post-meal high followed by low
Cause: Bolusing after eating
Solution: Bolus before eating

1) Sudden rise in SG indicates no pre-meal bolus

2) Auto Basal increases to compensate for rise

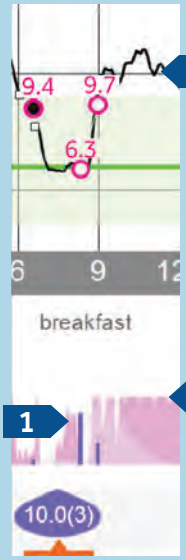


3) Carbs entered (orange) and Post-meal bolus given (purple)

4) SG falls sharply / goes low

Issue: Post-meal sustained high
Cause: ICR too weak
Solution: Strengthen ICR

1) Bolus given pre-meal (as recommended)



2) Auto Basal increases in an attempt to compensate for post-meal high

3) SG remains high > 3 hours despite meal bolus and maximum Auto Basal

Issue: Post-meal highs followed by some near-lows
Causes: Missed meal boluses or Post-meal bolus
Solution: Bolus before eating

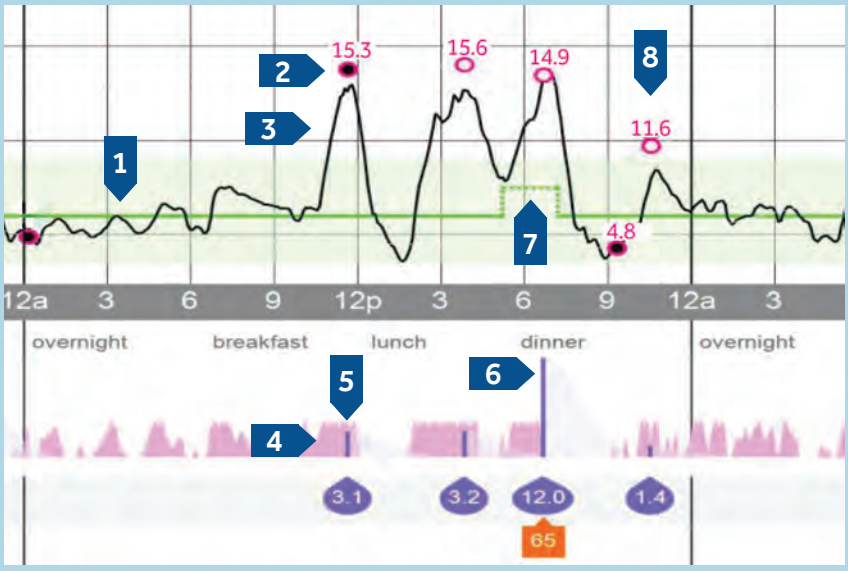
Illustration of behaviours that affect glucose across a 24 hour day

1) SG stable overnight

2) Calibrations (black circles)

3) Sudden rise in SG indicates food eaten, no bolus

4) Auto Basal increases to try and compensate for rise in SG



5) Correction bolus given to correct high and decrease SG

6) Food bolus given post-meal; Auto Basal stops; SG declines; near-low

7) Temp target set for exercise

8) Snack eaten without food bolus; bedtime correction bolus given

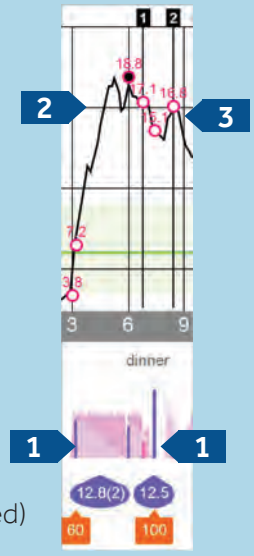
Note: In this example, exercise may have contributed to near low.

Weekly Review Report (continued)

Evaluate Auto Mode Exits (focus on exits that can be controlled by setting or behaviour changes first).

The most common exits that setting or behaviour modifications can help mitigate are:

- **No calibration:** Encourage calibrating 3 to 4 times a day and always before bed.
- **High SG:** Evaluate ICR. Encourage entry of all carbs, bolusing before eating, giving recommended correction boluses.
- **Auto Mode Max Delivery:** Assess ICR. Encourage entry of all carbs, bolusing before eating, giving recommended correction boluses. Each time a BG is entered, the Max delivery time-limit resets.
- **Auto Mode Min Delivery:** Occurs if no insulin has delivered for 2½ hours (i.e., stable SG, low SG, or SG is dropping). System will request a BG entry to verify sensor accuracy. Once BG is entered, the system will re-enter Auto Mode and reset Min Delivery time out limit to 2½ hours.

Issue: High SG exit **Cause:** ICR too weak (prolonged post-meal high) **Solution:** Strengthen ICR	**Issue:** No calibration exit **Cause:** Missed calibration (> 12hrs. since calibrated) **Solution:** Calibrate before bed
2) Rapid SG rise from inadequate food bolus (ICR too weak)  3) Post-meal highs persist. SG remains >13.9mmol/L for 3 hours. Results in 2 High SG exits 1) Boluses pre-meal (as instructed)	3) Exited after 90 minutes of Safe Basal delivery 1) Last calibration at 3pm 4) Calibrated at 6am & re-entered Auto Mode 2) Missed calibration at 3am, SG tracing stopped

Strategies used for reducing overnight Min and Max Delivery exits:

- Check BG before sleep / calibrate system. (Entering BG resets Min and Max Delivery time to 2½ and 4 hours)
- If BG is on low-side of normal at bedtime, encourage a protein snack to raise glucose slightly. This should result in some basal insulin delivery and help prevent overnight Min Basal Delivery exits.
- If BG is > 8.3 mmol/L , give system-recommended correction bolus.

KEY LEARNINGS FOR OPTIMISING TIME IN AUTO MODE

- The most impactful setting clinicians can adjust is the ICR.
- The most impactful behaviours a patient can implement are bolusing for food and giving correction dose (if needed) before eating, calibrating 3 - 4 times a day, and entering a BG when requested by the system.

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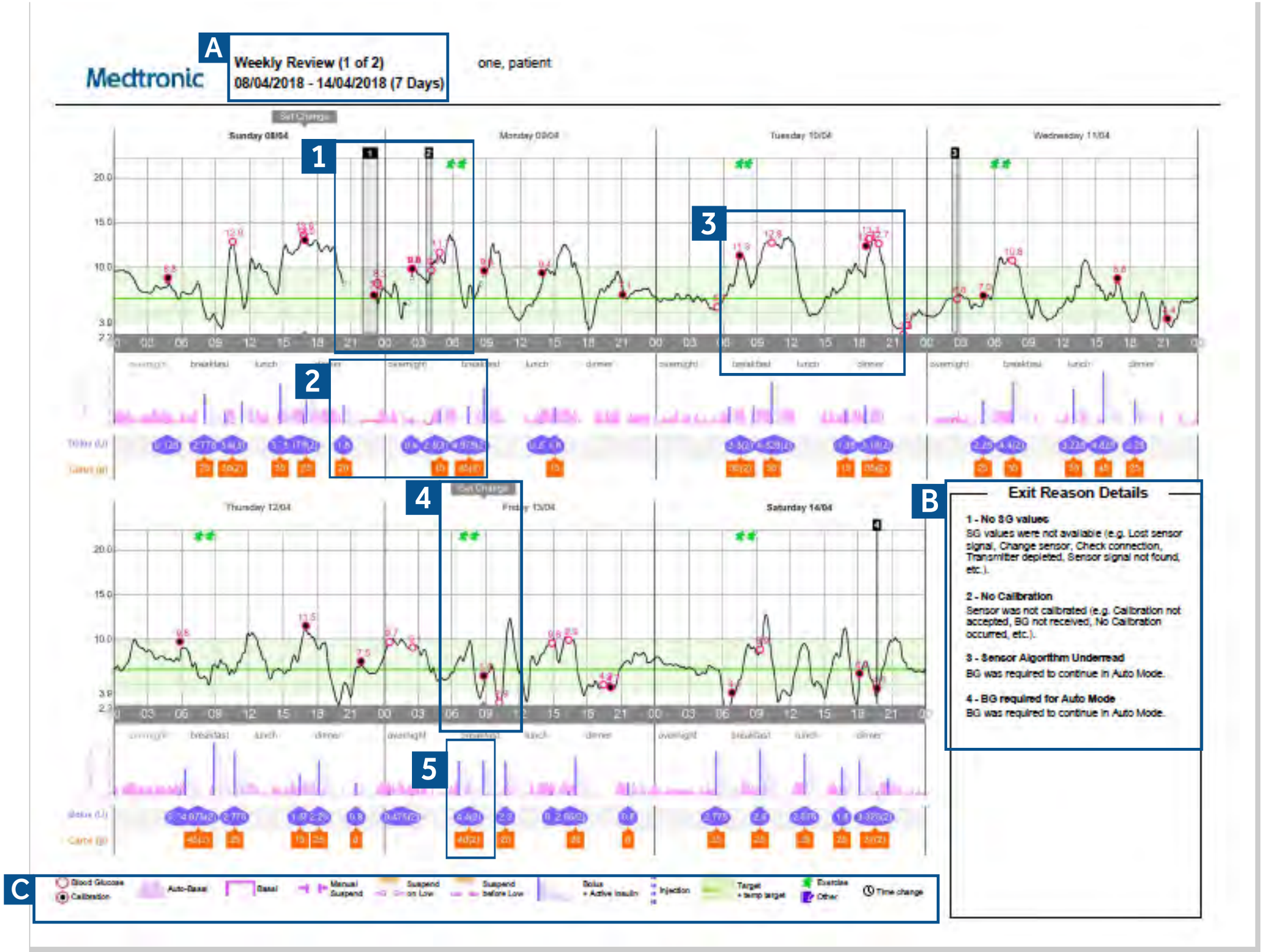
Understanding the CareLink™ Weekly Review Report



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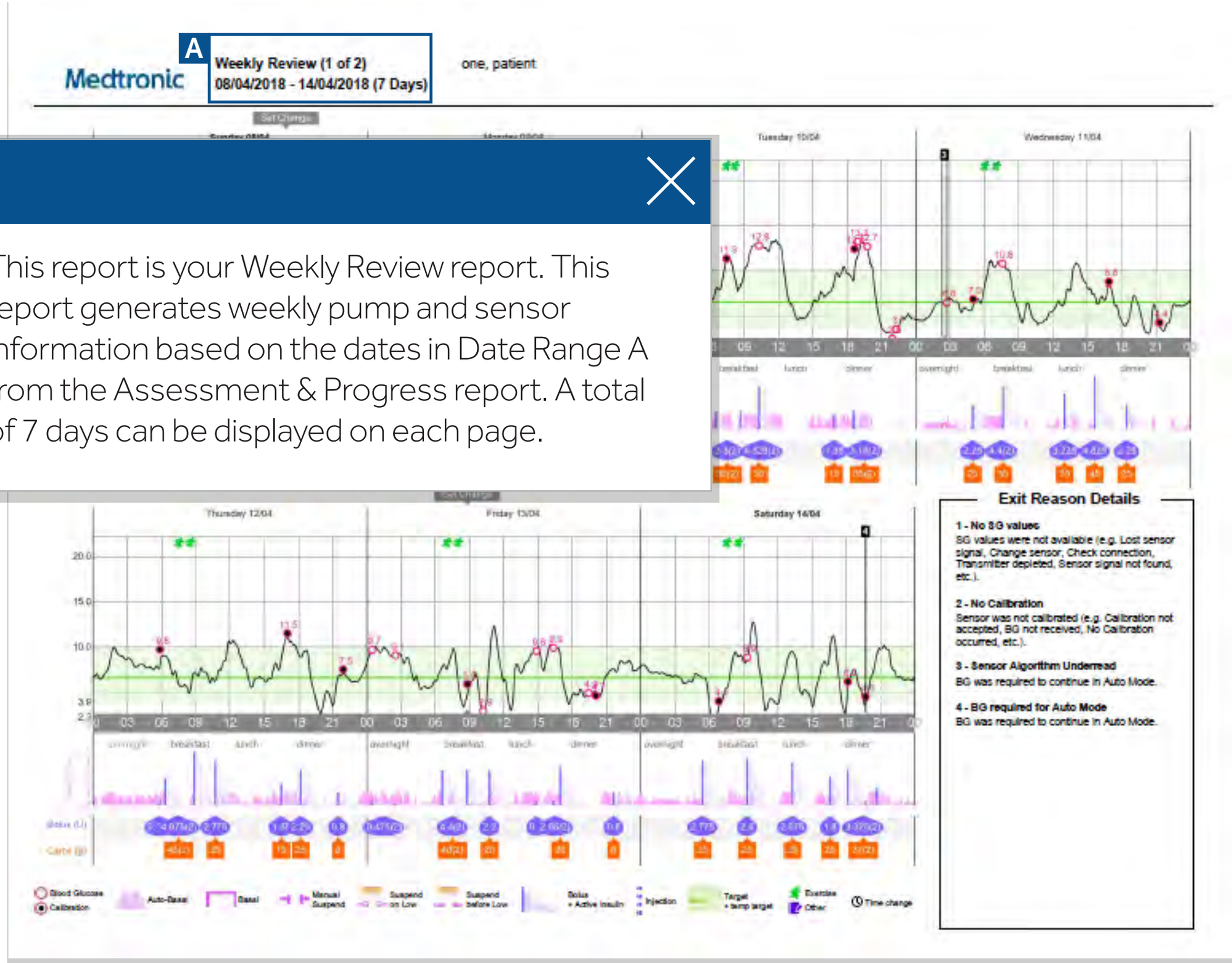

This report is your Weekly Review report. This report generates weekly pump and sensor information based on the dates in Date Range A from the Assessment & Progress report. A total of 7 days can be displayed on each page.

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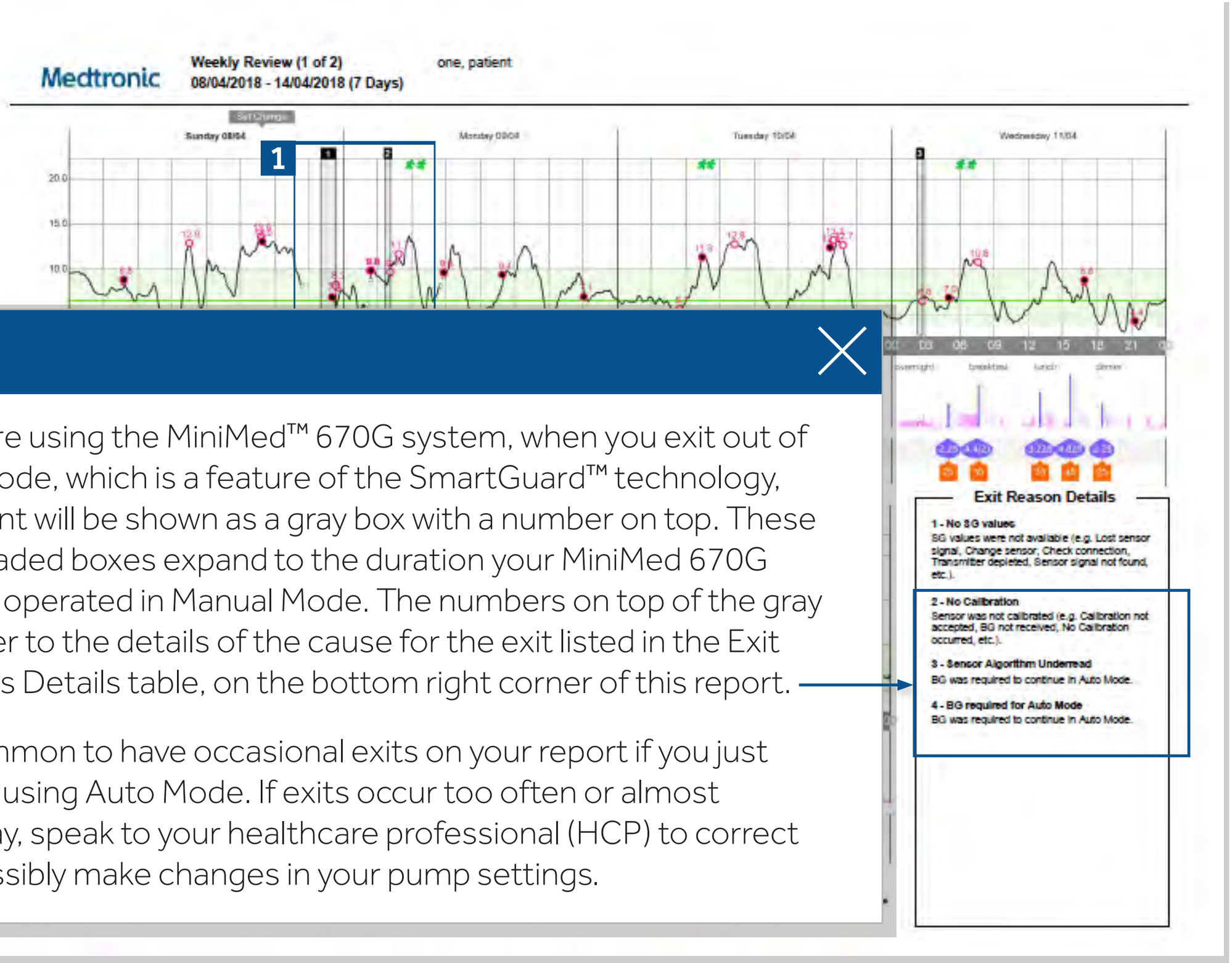

If you are using the MiniMed™ 670G system, when you exit out of Auto Mode, which is a feature of the SmartGuard™ technology, the event will be shown as a gray box with a number on top. These gray shaded boxes expand to the duration your MiniMed 670G system operated in Manual Mode. The numbers on top of the gray box refer to the details of the cause for the exit listed in the Exit Reasons Details table, on the bottom right corner of this report.

It is common to have occasional exits on your report if you just started using Auto Mode. If exits occur too often or almost everyday, speak to your healthcare professional (HCP) to correct and possibly make changes in your pump settings.

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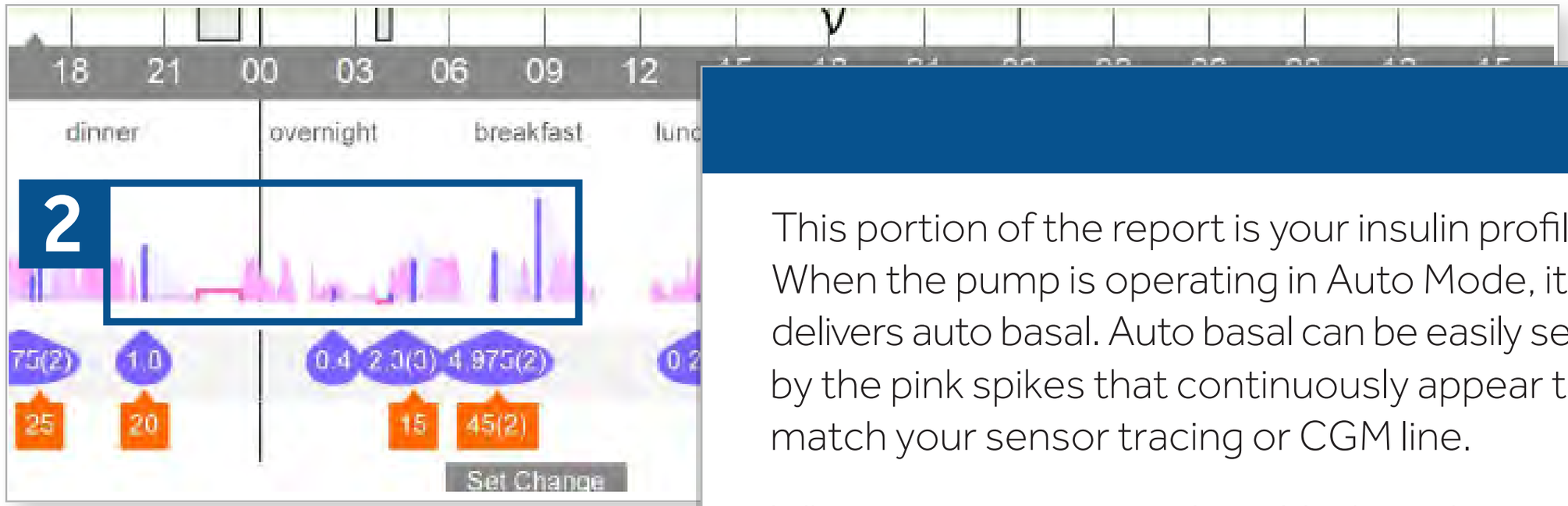

This portion of the report is your insulin profile. When the pump is operating in Auto Mode, it delivers auto basal. Auto basal can be easily seen by the pink spikes that continuously appear to match your sensor tracing or CGM line.

When your pump exits Auto Mode and is operating in Manual Mode, your auto basal now becomes a pre-set basal shown as a solid pink line. Your pre-set basal is the programmed basal rate set by your HCP before you were trained to initiate Auto Mode. This pre-set basal rate is your back up basal rate when Auto Mode exits occur.

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The solid black line is your sensor tracing, or your continuous glucose monitoring (CGM) line. Your CGM records up to 288 sensor glucose (SG) values every day and creates this line to show the effect of insulin, carbs, and activity has on your glucose readings.

Review the consistency of your SG readings with your HCP. Are they always high or above target? Is your glucose frequently below target? Your target in CareLink™ is 70-180mg/dL by default and can be modified in your CareLink™ Personal Preferences for report settings. Any duration and frequency below and above target should be addressed with your HCP at your next scheduled follow up phone call or visit. The solid green line inside the target range is your pump target of 120mg/dL. This glucose target cannot be adjusted.

Your meal periods are also listed below the time to show when meals occur and when SG values change during mealtimes.

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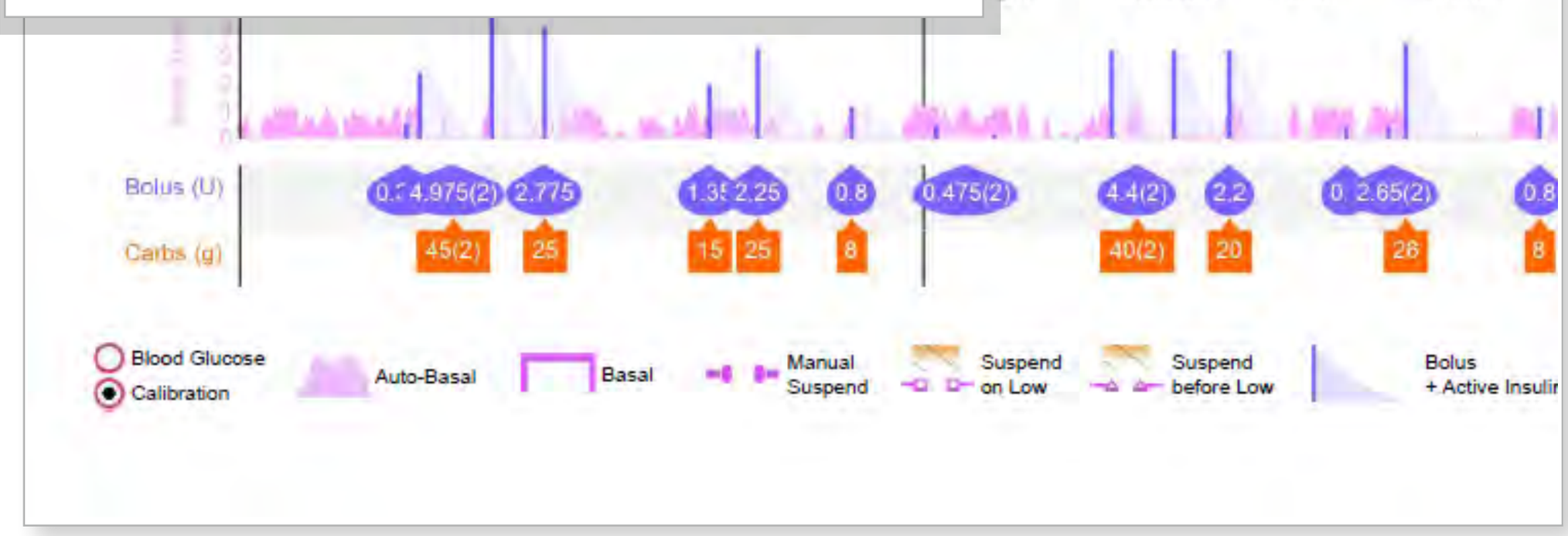
Filled in circle - blood glucose (BG) used to calibrate your sensor.

Empty circle - BG entry from your pump or BG meter.

In this report you can also see when an infusion set change occurred. In this example, you can see a small gray arrow above 9am indicating a set change was done Friday.



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The circles in purple paired with a purple bar above them are your bolus insulin. Every time you bolus for a correction or a meal, a purple circle with a total amount of insulin given and the number of boluses that were given will be shown in parenthesis. For example, during lunch, 2 bolusestotaling 4.4 units of insulin were given. In each bolus, there is an Active Insulin time. This active insulin curve will follow a bolus and extend to the duration of the Active Insulin time set by your HCP in your pump settings.

The orange boxes below the purple circles are carb entries entered into the pump and used to calculate meal boluses. In this example, 2 entries were entered during the lunch meal period. These 2 entries equaled 40 grams of carbs which were used to calculate the total 4.4 units given.

Frequent boluses are appropriate as long as all carb entries are entered into the pump so the pump can correctly calculate the appropriate amount of insulin needed for your glucose readings.

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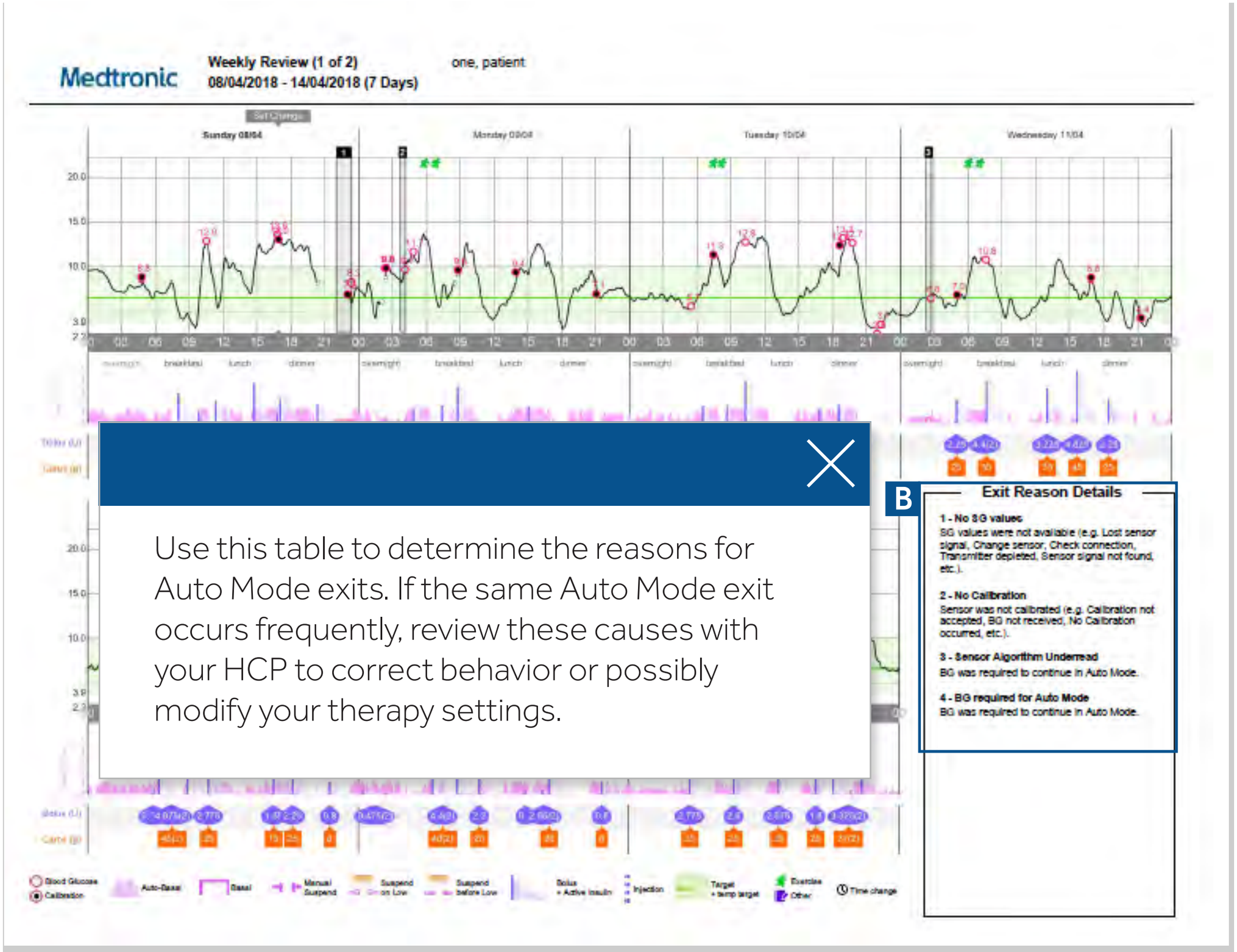

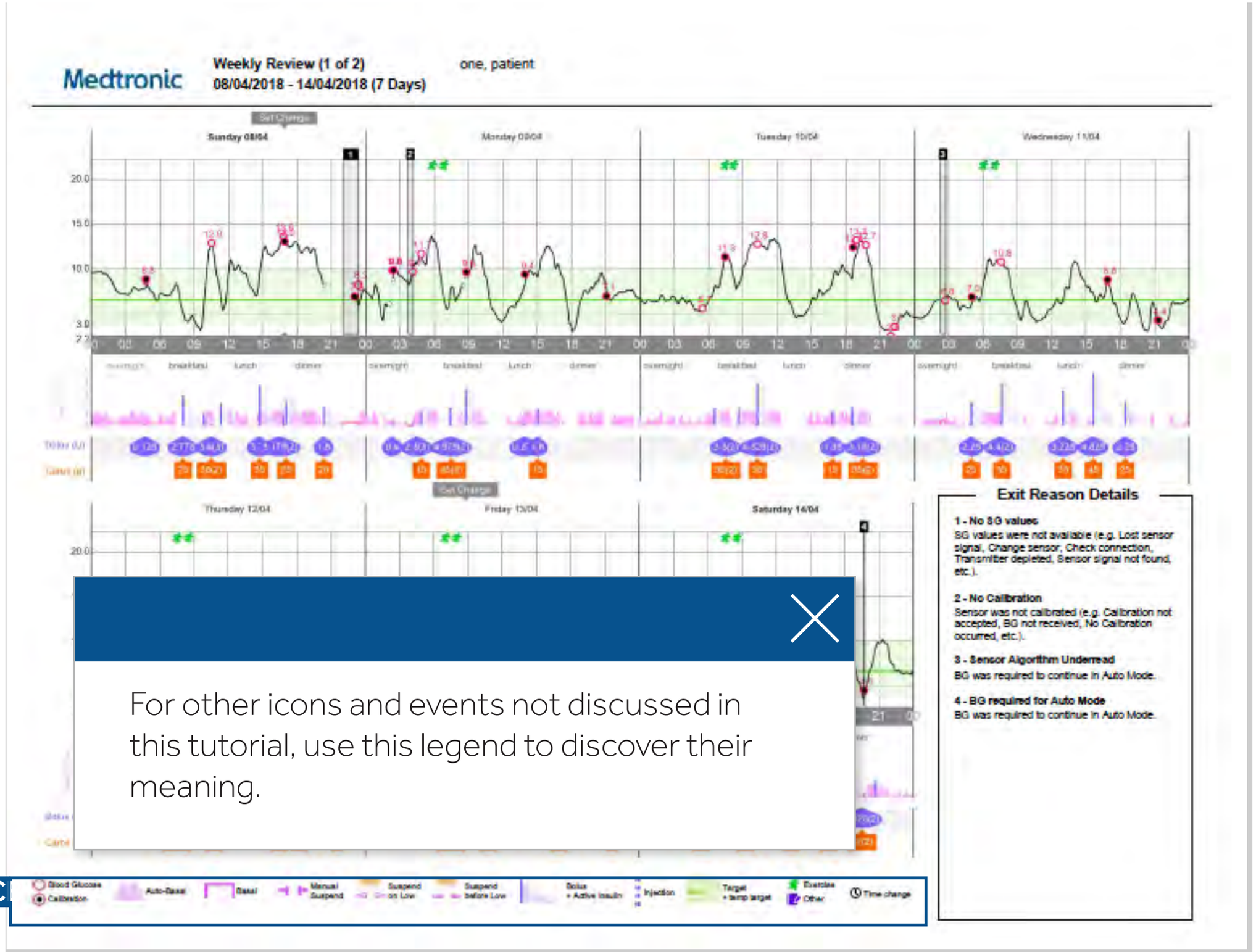
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Weekly Review (1 of 2)
08/04/2018 - 14/04/2018 (7 Days)
one, patient
Sunday 08/04
Monday 09/04
Tuesday 10/04
Wednesday 11/04
Thursday 12/04
Friday 13/04
Saturday 14/04
Exit Reason Details
1 - No SG values
SG values were not available (e.g. Lost sensor signal, Change sensor, Check connection, Transmitter depleted, Sensor signal not found, etc.).
2 - No Calibration
Sensor was not calibrated (e.g. Calibration not accepted, BG not received, No Calibration occurred, etc.).
3 - Sensor Algorithm Underread
BG was required to continue in Auto Mode.
4 - BG required for Auto Mode
BG was required to continue in Auto Mode.
For other icons and events not discussed in this tutorial, use this legend to discover their meaning.
Blood Glucose
Calibration
Auto-Basal
Basal
Manual Suspend
Suspend on Low
Suspend before Low
Bolus + Active Insulin
Injection
Target + temp target
Exercise
Other
Time change

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Safety Information: CareLink™ software
CareLink™ software is intended for use as a tool to help manage diabetes. The purpose of the software is to take information transmitted from insulin pumps, glucose meters and continuous glucose monitoring systems, and turn it into CareLink™ reports. The reports provide information that can be used to identify trends and track daily activities such as carbohydrates consumed, meal times, insulin delivery, and glucose readings. NOTE: CareLink™ report data is intended for use as an adjunct in the management of diabetes only and NOT intended to be relied upon by itself.

For a listing of indications, contraindications, precautions, warnings and potential adverse events please refer to the instructions for Use.

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