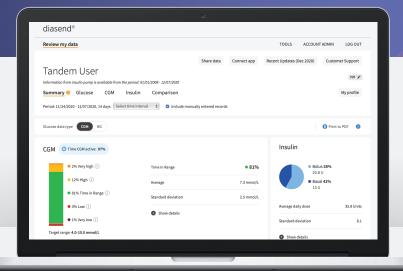
# **Analyzing Diasend Reports**

A Step-by-Step Approach to understanding the t:slim X2 Insulin Pump with Control-IQ Technology



For Healthcare Providers



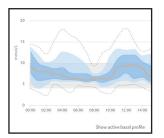
## **Identifying Patterns Using Diasend Reports**

This document is designed to help pump trainers use diasend reports to spot trends and analyze data. While it does not include all diasend reports, it identifies and explores the most common reports used for analysis.

The Summary Report	
This report provides insight into the person with diabetes (PWD) and their current management.	
Continuous Glucose Monitoring (CGM)	<ul> <li>Time CGM Active:</li> <li>Aim for &gt; 90%. If less, assess why?</li> <li>Time in Range:*</li> <li>% below range, % in range, and % above range</li> <li>Average glucose and Standard Deviation</li> <li>If TIR &lt; 60%: Assess bolus behaviour — (timing, missed?); basal rates; bolus doses (adjust ICR, correction factor, if needed).</li> <li>If TBR ≥ 5%: Assess bolus doses, basal rates; ensure a sleep schedule is turned on; is Exercise Activity being used?</li> </ul> *As measured by CGM.
Insulin	<ul> <li>Basal/bolus split, average total daily insulin (TDI):</li> <li>Compare inputted TDI to actual</li> <li>Click on "Show Details" to display:</li> <li>Average # bolus/day</li> <li>Average days between cannula fills</li> <li>View how often the infusion set is being changed.</li> <li>Note: TruSteel™ infusion set does not have a cannula fill.</li> </ul>
Carbs	Average carb intake and Standard Deviation: Indicates consistency of carbohydrate intake and may also shed light on the PWD's understanding of carb counting.
CGM Over Time/Daily Patterns	Shows TIR, average BG, and standard deviation by time of day. Assess for hourly patterns (hypo/hyperglycemia) and/or patterns by day of week/progress over time.

#### Review CGM/Standard Day Tab (AGP)

This report helps to assess overall glycemia and identify patterns/trends of hypoglycemia or hyperglycemia.



To easily look for overnight trends, change the view to "Noon-to-noon."

With Control-IQ<sup>™</sup> technology, clicking "Show active profile" will show active programmed Personal Profile basal rates.

Look at the dark blue graph area because this is where 50% of the CGM values lie.

Dotted lines are only the outliers.

According to Battelino & Associates in 2019, the coefficient of variation (CV) goal is < 36%.

**Glucose Management Indicator (GMI):** GMI indicates the average A1C level that would be expected based on mean glucose measured in a large number of individuals with diabetes. Mean glucose ideally is derived from at least 14 days of CGM data. The GMI may be similar to, higher than, or lower than the laboratory A1C.<sup>2</sup>

#### Review Comparison Day-by-Day

This report helps explore the potential reasons for the patterns/trends identified in the Summary and AGP.



Review daily CGM profile - assess for hypo/hyperglycemia. If achieving desired TIR, great! If pattern of hypo/hyperglycemia identified:

- Assess impact of current insulin:carb ratios and correction factors
- Review frequency and impact of automatic correction boluses
- Look for bolus overrides or additional boluses dialed in by the user which may explain unexpected hypoglycemia
- Assess for appropriate use of Sleep Activity (grey bar) and Exercise Activity (yellow bar)
- Review basal modulation in insulin graph

Assess if CGM trend aligns with carbohydrates entered (green triangles) and bolus timing. If it does not match, review bolus timing.

Note: Confirm which carb entry was a bolus delivery when multiple entries are captured.

In the "Bolus" tab, look at: Meal, Correction, and Insulin on Board (IOB) to assess for bolus calculation overrides.

Option to click "Pump Alarm Icon" and/or "Events Icon" on the upper left corner of the insulin graph.

### Review Insulin -> Pump Settings



Confirm the active Personal Profile.

The insulin duration and target BG in the pump settings will show as the programmed settings. When Control-IQ technology is on, the DIA is 5 hours and target BG is 6.1 mmol/L. Consider aligning programmed settings to these parameters.

Compare the average basal insulin delivered from the Summary report to the total programmed basal for the active basal profile.

Select Print Comparison of Pump Settings to PDF to view a comparison of the pump settings from the last eight downloads. Any changes will appear highlighted in yellow.

#### **Reminder:**

- Customize the PDF wizard in order to print the desired diasend report in one click.
- Suggested reports = Summary, CGM Standard Day, Pump Settings and Comparison Day by Day.
- The last two weeks of data are shown as default, however, one week, two weeks, one month, or a custom date range can be selected. Reports can be printed in colour or black and white.



- ✓ Look at these reports the same way you would assess pump parameters without automated insulin delivery.
- Remember to always look for patterns before making insulin dose adjustments. Self-management skills and education with insulin pump therapy remain important for success.
- ✓ Frequent suspensions do not necessarily indicate hypoglycemia or indicate a need for a change in therapy. What is relevant here is the pattern and/or duration of the suspensions as they relate to glucose outcomes.
- ✓ Assess basal modulation for patterns and adjust personal profile basal rates as needed. Be careful not to focus too much on basal modulation, especially if TIR goals are being met.
- Consider using different Personal Profiles with certain situations (i.e. exercise, work schedules, menses, sick days).

- ✓ It is important to turn the Exercise Activity on 60-90 minutes prior to the initiation of physical activity. Additional strategies to prevent hypoglycemia during exercise may be required.
- √ Be sure to encourage user to stop insulin delivery when disconnected from the pump (i.e. for a shower or swimming) to help keep Insulin on Board accurate.
- ✓ Consider treating hypoglycemia with less carbohydrate in order to help prevent rebound hyperglycemia. As the PWD has already experienced a reduction and potential suspension of basal insulin delivery, the full carbohydrate treatment may not be necessary. The suggestion is to use 5-10 grams of carbohydrate and evaluate.



Control-IQ technology does not prevent all high and low blood glucose events, and is not a substitute for meal boluses and active self-management of your diabetes. Control-IQ technology will not be able to predict sensor glucose values and adjust insulin dosing if your CGM is not working properly or is unable to communicate with your pump. Always pay attention to your symptoms and blood glucose levels and treat accordingly. Please visit tandemdiabetes.com/tslimX2-use for more information.



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References: 1. Battelino T, Danne T, Bergenstal RM, et al. Clinical targets for continuous glucose monitoring data interpretation: Recommendations from the international consensus on time in range. Diabetes Care. 2019;42(8):1593-1603. 2. JCRH (2021). Glucose Management Indicator (GMI). https://www.jaeb.org/gmi/

Important Safety Information: The t:slim X2 insulin pump with Control-IQ technology (the System) consists of the t:slim X2 insulin pump, which contains Control-IQ technology, and a compatible continuous glucose monitor (CGM, sold separately). The t:slim X2 insulin pump is intended for the subcutaneous delivery of insulin, at set and variable rates, for the management of diabetes mellitus in people requiring insulin. The t:slim X2 insulin pump can be used solely for continuous insulin delivery and as part of the System. When used with a compatible CGM, the System can be used to automatically increase, decrease, and suspend delivery of basal insulin based on CGM sensor readings and predicted glucose values. The System can also deliver correction boluses when the glucose value is predicted to exceed a predefined threshold. The pump and the System are indicated for use in individuals six years of age and greater. The pump and the System are intended for single user use. The pump and the System are indicated for use with NovoRapid or Humalog U-100 insulin. The System is intended for the management of Type 1 diabetes.

WARNING: Control-IQ technology should not be used by anyone under the age of six years old. It should also not be used in users who require less than 10 units of insulin per day or who weigh less than 25 kilograms.

The System is not indicated for use in pregnant women, people on dialysis, or critically ill users. Do not use the System if using hydroxyurea.

Users of the pump and the System must: be willing and able to use the insulin pump, CGM, and all other system components in accordance with their respective instructions for use; test blood glucose levels as recommended by their healthcare provider; demonstrate adequate carb-counting skills; maintain sufficient diabetes self-care skills; see healthcare provider(s) regularly; and have adequate vision and/or hearing to recognize all functions of the pump, including alerts, alarms, and reminders. The t:slim X2 pump and the CGM transmitter and sensor must be removed before MRI, CT, or diathermy treatment. Visit tandemdiabetes.com/safetyinfo for additional important safety information.

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