Form 9: School Healthcare Plan for 'T:Slim X2' Insulin Pump with Control IQ

(CGM) for T Slim X2 with Control IQ

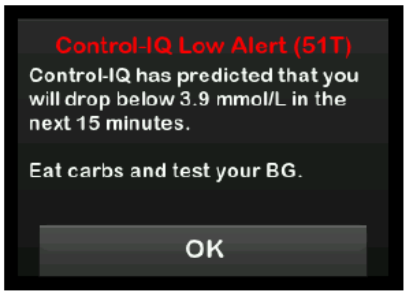
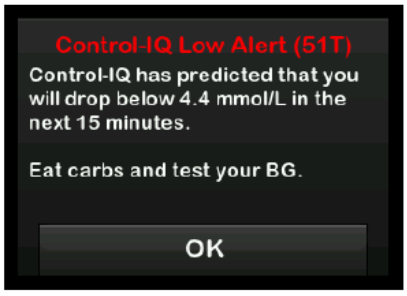
A continuous glucose monitor is a device that measures interstitial glucose levels every 5 minutes and sends these readings to an insulin pump. As it is measuring interstitial glucose it can lag behind blood glucose levels.

The CGM that is used with this insulin pump is called DEXCOM and has been licensed for 'no finger prick testing' – therefore the sensor data at snack and lunch time can be used without a finger prick, follow guidance below when finger prick may be required.

The CGM is set with limits of acceptable glucose levels and will alert via the insulin pump if these limits are reached. These will be documented on the care plan clearly for staff reference.

The Control IQ feature of the system means the pump has the additional functions:

- *Auto adjusts background insulin delivery every 5 mins using the Dexcom Sensor readings which are displayed on the pump home screen*
- *Auto corrects if the sensor glucose follows the algorithm trend to trigger a small insulin correction without any interaction by the user*
- *The system will predict the blood glucose level and adjusts insulin 30 minutes ahead of time by using the sensor data from the Continued Glucose Monitor.*

Screen	Explanation	
What will I see on the screen?  	What does it mean?	Control-IQ Low Alert has predicted that your glucose reading will drop below 3.9 mmol/L, or below 4.4 mmol/L if Exercise is enabled, in the next 15 minutes.
	How will the System notify me?	2 vibrations, then 2 vibrations/beeps every 5 minutes until acknowledged.
	Will the System re-notify me?	Yes, every 5 minutes until acknowledged.
	How should I respond?	Advised to confirm Blood Glucose (BG) value via finger prick: • If below 4.0 – treat hypo following the 'hypoglycaemic flow chart' • If BG value between ___ and ___ mmol/mol then advised to give child ____grams of carbs WITHOUT insulin

Signature Parent/Carer	**Date**

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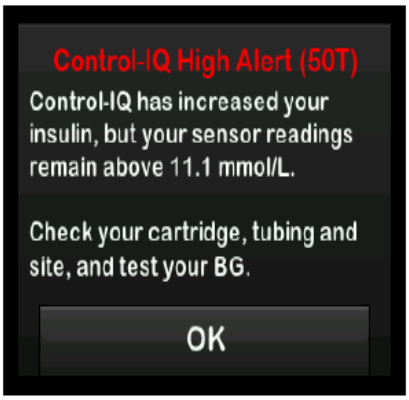
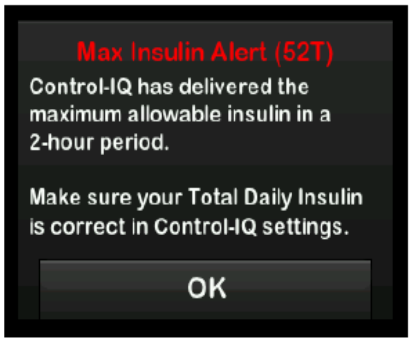
What will I see on the screen? 	What does it mean?	Control-IQ technology has increased insulin delivery, but detects a glucose reading above 11.1 mmol/L and does not predict that the glucose reading will decrease in the next 30 minutes.
	How will the System notify me?	2 vibrations, then 2 vibrations/beeps every 5 minutes until acknowledged.
	Will the System re-notify me?	Yes, every 5 minutes until acknowledged.
	How should I respond?	Check your cartridge, tubing, and site, and test your BG. Treat your high glucose as necessary. Tap OK to close the alert screen.

- **Acknowledge message on screen by pressing OK**
- **If High limit changed to 14 mmol/L this alert wont display until it predicts 14 limit**
- **Advice – If Blood Glucose Value 14 mmols or above – Follow 'Hyperglycaemic Flow Chart'**

Screen	Explanation	
What will I see on the screen? 	What does it mean?	The pump has delivered the maximum allowable 2 hour insulin amount based on your Total Daily Insulin setting. You see this alert when Control-IQ technology has delivered 50% of your Total Daily Insulin (through basal and/or bolus deliveries) over the previous rolling 2 hour window, and detects this condition for 20 minutes in a row. Control-IQ technology will suspend insulin delivery for a minimum of 5 minutes, and then resume insulin delivery once the condition is no longer detected.
	How will the System notify me?	2 vibrations, then 2 vibrations/beeps every 5 minutes until acknowledged.
	Will the System re-notify me?	Yes, every 5 minutes until acknowledged.
	How should I respond?	Tap OK.

- **Acknowledge message on screen by pressing OK.**
- **No intervention required – system should resolve this alert itself.**

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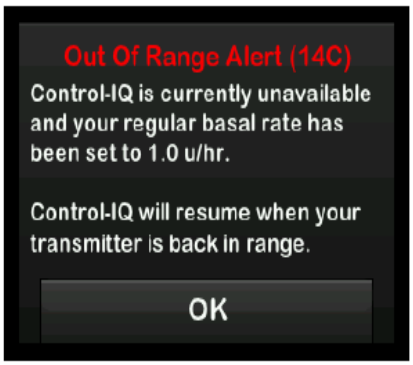
Screen	Explanation	
What will I see on the screen? 	What does it mean?	The transmitter and pump are not communicating. The pump will not receive sensor glucose readings, and Control-IQ technology is not able to predict glucose levels or adjust insulin delivery.
	How will the System notify me?	1 vibrate, then vibration/beep every 5 minutes until the transmitter and pump are back in range.
	Will the System re-notify me?	Yes, if the transmitter and pump remain out of range.
	How should I respond?	Tap OK to confirm and move the transmitter and pump closer together, or remove the obstruction between them.

Screen	Explanation	
What will I see on the screen? 	What does it mean?	Control-IQ technology is turned on, but the transmitter and pump are not communicating. The pump will not receive sensor glucose readings. Control-IQ technology will continue to adjust basal rates and deliver automatic correction boluses for the first 20 minutes that the transmitter and pump are out of range. Control-IQ technology will resume automated insulin dosing once the transmitter and pump are back within range.
	How will the System notify me?	1 vibrate, then vibration/beep every 5 minutes until the transmitter and pump are back in range.
	Will the System re-notify me?	Yes, if the transmitter and pump remain out of range.
	How should I respond?	Tap OK to confirm and move the transmitter and pump closer together, or remove the obstruction between them.

- **Contact Parents if this message occurs – this message would be a rare occurrence and if does occur parents will need to troubleshoot**

Control-IQ Technology Icon Definitions

Symbol	Meaning
	Control-IQ technology is enabled but not actively increasing or decreasing basal insulin delivery.
	Control-IQ technology is increasing basal insulin delivery.
	Control-IQ technology is decreasing basal insulin delivery.
	Control-IQ technology has stopped basal insulin delivery.
BOLUS Control-IQ: 2.8 u	Control-IQ technology is delivering an automatic correction bolus (or an automatic bolus).
zzz	The sleep activity is enabled.

Symbol	Meaning
B	Basal insulin is programmed and being delivered.
B	Control-IQ technology is increasing basal insulin delivery.
B	Control-IQ technology is decreasing basal insulin delivery.
0	Basal insulin delivery is stopped and a basal rate of 0 u/hr is active.
	Control-IQ technology is delivering an automatic correction bolus (or an automatic bolus).
	The exercise activity is enabled.

Signature Parent/Carer	**Date**

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Individual Patient Settings:

These are subject to change by the parent/carer and it is their responsibility to update the care plan when changes are made:

Low Limit: _____ High Limit: _____

Exercise Mode

To manage blood glucose levels surrounding exercise, as well as the limited use of "free" carbohydrates (up to 5grams carbohydrate without administration of insulin) a pupil may want to temporarily change their selected glucose target eg. for physical activity. When using control IQ this function is called EXERCISE. During Exercise, Control-IQ technology raises the target glucose range to between 7.8 mmol/ L–8.9 mmol/L. This target range is smaller and higher than the usual set target glucose range set in the pupil's insulin pump.

We would normally advise that the EXERCISE function is turned on 1 hour before any activity begins and should remain on for the duration of the activity and 1 hour post activity.

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TO TURN ON EXERCISE

1. From the home screen tap OPTIONS
2. Tap ACTIVITY
3. Tap the START text next to EXERCISE
4. An EXERCISE STARTED message will temporarily appear. The Exercise icon (small white running man icon in top left of home screen) is displayed on the Home screen.

TO TURN OFF EXERCISE

1. From Home screen tap OPTIONS
2. Tap the STOP next to EXERCISE
3. An EXERCISE STOPPED message will be temporarily displayed and the EXERCISE icon (small white running man icon in top left of home screen) is removed from the Home screen

Key Tips:

- To acknowledge alerts/alarms follow on screen instructions and press 'OK'
- Do not calibrate sensor unless instructed to do so by parents
- Blood Glucose finger prick test may be required prior to bolus (snack/lunch) – discuss preference with parents
- Allow pump to suspend and resume insulin delivery according to the sensor glucose levels.
- If bolus of insulin is required for food/correction follow usual process for delivering a bolus 'see HCP for details'
- If hypo does occur then follow hypo flowchart as per the insulin pump care plan.

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Parent/Guardian Signature: .....

Health Care Professional Signature: ……..

School Signature: .....