

## Diabetes Medical Management Plan

Effective Dates :

Student's Name : **'INSERT NAME'**

Date of Birth:

School:

Medical Condition: **Type 1 Diabetes due to Congenital Hyperinsulinism**

### Contact Information:

Parent's name :

Address :

Telephone home :

**Mother's mobile :**

Hospital Consultant :

Diabetes Nurse Specialist :

Hospital Address :

Telephone :

Email :

**Notify parents or emergency contact in the following situations:** In cases of hyperglycemia, hypoglycaemia (when third party help has been needed), when the site needs to be changed and generally at times of uncertainty it is preferable to contact the parents. *(change to suit you)*

ALL SUPPLY OR STUDENT TEACHERS WILL ALSO NEED TO BE FAMILIAR WITH THIS PLAN TO KEEP **'insert name'** SAFE IN SCHOOL.

'insert name' has Type 1 diabetes, meaning she can no longer produce insulin. 'insert name' was born with Congenital Hyperinsulinism ([www.hi-fund.org](http://www.hi-fund.org)) and had 95 to 98% of her pancreas removed at 5 weeks old. Without her pancreas means being without insulin. Without insulin, the body cannot use glucose. It also means that 'insert name' CANNOT digest her food so has to take digestive enzymes at meal times.

Diabetes cannot be cured, but it can be treated effectively. The aim of the treatment is to keep the blood glucose level close to the normal range (4-7mmol, rising to no higher than 10mmol two hours after a meal) so it is neither too high (hyperglycaemia, also known as a hyper) nor too low (hypoglycaemia, also known as a hypo).

### **Glucose Monitoring**

Target range for blood glucose is  4-7 mmols

**Usual times to check blood glucose:** 10am, 12.30 and/or before lunch, 2.30 pm

Times to do extra blood glucose checks (*tick all that apply*)

- When student exhibits symptoms or sensor warns of hypoglycaemia
- Prior to and after any PE or additional physical activity
- When student exhibits symptoms or sensor warns of hyperglycemia

Can student perform own blood glucose checks?  Yes  No

Results of any tests taken are recorded on the monitor's memory and the parents will use this for record keeping.

Any blood glucose level that is outside of the target range should be acted upon, following the instructions in this management plan. Call the parents for advice at any time. (Mum's mobile 'insert number')

### **Type of blood glucose meter / finger prick that is used:**

Accu-chek Mobile meter and fastclix finger pricker *insert your own make/model*

Or

One Touch Ultra 2 with multiclix finger pricker *insert your own make/model*

(spare monitor in medical box)

### **Items 'insert name' should carry with her at all Times**

'insert name' must carry her pump, blood testing kit and hypo treatment with her at all times in a bag and extra supplies should be kept by a responsible adult in the event of 'insert name''s bag going missing or items being damaged or running out.

'insert name' also wears a continuous glucose sensor that monitors her glucose level constantly. The pump will display an average of these readings every 5 minutes and alarm when the glucose level goes outside target range.

The screen should be checked when the pump alarms within the school environment and acted upon.

Any suspected high or low glucose level should be confirmed with a finger prick blood glucose level. Any blood glucose level that is outside of the target range should be acted upon (**using the bolus wizard**) following the instructions in this management plan.

The pump has the ability to cut off if 'insert name's' glucose level drops to 3.8 mmol according to the sensor. A finger prick test is absolutely necessary at this point to determine if 'insert name' is hypo and/or whether the pump needs to be turned back on. The parents should be called at this point (mum's mobile **insert number**)

**Student Pump Abilities/ Skills:**

*Student able to do independently*

Count carbohydrates	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Bolus correct amount for carbohydrates consumed	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Calculate and administer corrective bolus	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Calculate and set basal profiles	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Calculate and set temporary basal rate	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Disconnect pump	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Reconnect pump at infusion set	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Prepare reservoir and tubing	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Insert infusion set	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Troubleshoot alarms and malfunctions	<input type="checkbox"/> Yes	<input type="checkbox"/> No

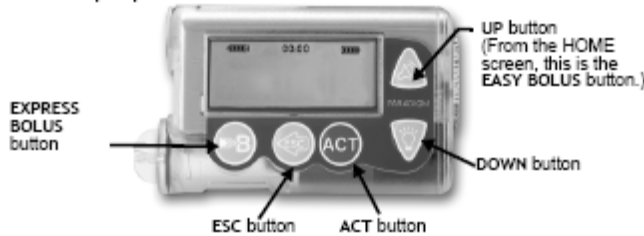
**Sharps disposal**

The family will take any sharps away with them at the end of each day.

**Insulin Pump (Medtronic Paradigm VEO 754)** *An example of a page of information for an insulin pump*

'insert name' wears an insulin pump that is powered by one AAA battery. This delivers insulin constantly over a 24 hour period (basal rate).

The buttons on the pump are used to navigate through the menus and screens, and to program the features of the pump.



**From the HOME screen**

EASY BOLUS button—Shortcut to set and deliver an Easy Bolus.

Turns the backlight on/off from the HOME screen.

Opens the MAIN MENU.

If Sensor is Off:  
Opens the pump STATUS screen.  
If Sensor is On:  
1 press shows a 3-hour sensor glucose graph,  
2 presses shows a 24-hour sensor glucose graph,  
3 presses opens the pump STATUS screen,  
4 presses opens the sensor STATUS screen.

**From the menus and programming screens**

Increases / decreases the value of a flashing item.  
 Scrolls up and down the items in a list.

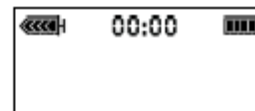
Accepts a selected menu item or activates a selected setting.

Returns to previous screen. Backs out of unintentional menu selections if the ACT button has not been pressed yet.

EXPRESS BOLUS button: Short-cut to the SET BOLUS MENU or Bolus Wizard to set up any bolus.

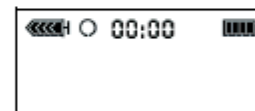
Press simultaneously with to turn on backlight when in the menus or press as a "shift" button in combination with another button to access certain features.

**Normal** - mode for standard pump operations for normal basal and bolus delivery. No special features are active (i.e., basal patterns, temp basal, etc.). No alarms and no alerts exist.



Normal Mode

**Special** - indicates a special feature is active or an alert condition(s) exists. Special mode does not restrict any of the pump functions. When the pump is in Special mode, an open circle appears at the top of the screen and it will beep/vibrate periodically to remind you of the condition. The conditions and features that will put the pump in Special mode are:



Special Mode

- Low Reservoir condition
- Low Battery condition
- Block feature is on
- Dual or Square Wave bolus delivery
- Basal pattern A or B is active
- Sensor alerts
- Temporary basal delivery

**Attention** - indicates insulin delivery has stopped. This can mean that the pump is in Suspend mode. It can also mean an alarm is active or an alarm condition exists that needs immediate attention for insulin delivery to resume. A solid circle appears at the top of the screen and the pump will beep periodically until either the pump is taken out of Suspend mode or the condition is cleared. The screen will show text describing the condition that put the pump in Attention mode. For example, if the reservoir is empty, "Empty Reservoir" will appear on the screen.



Attention Mode

When the pump is in Attention mode, it will beep/vibrate periodically to remind you of the condition. The beep/vibrate frequency varies depending on the condition that put the pump in Attention mode. Refer to the section, "Alarm conditions" on page 131 for alarm conditions that will trigger the Attention mode. See "Stopping your pump" on page 37 to learn about Suspend mode.

## Snacks Eaten at School

The amount of carbohydrate is calculated in whatever is eaten or drunk. Teachers need to inform parents of any extra food to be consumed in class prior to the day of the lesson so that they are able to advise 'insert name' of a carbohydrate count or to allow 'insert name' access to call her mum for advice if wanting to eat something not yet discussed or with no carb count on it.

### Hypoglycaemia (Low Blood Sugar - hypo)

'insert name' generally does **not show** any symptoms when her blood glucose levels are low (hypo) however she may have or display the following symptoms :

- may feel dizzy or her hands may shake
- may look very pale and may well feel unable to stand without feeling wobbly legs
- may talk rubbish or answer you with strange answers or may not be able to think of a word in a sentence or indeed finish a sentence.
- could seem tired, unwell and lethargic. She may say she feels low or may not be aware of it until she gets up to move about.
- If 'insert name' is having a severe hypo she may lie down or curl up in a ball on the floor.

**It is important she has fast acting glucose first and waits for the below protocol to take effect before having any other snack.**

## Emergency hypo treatment

### Testing Blood Sugars

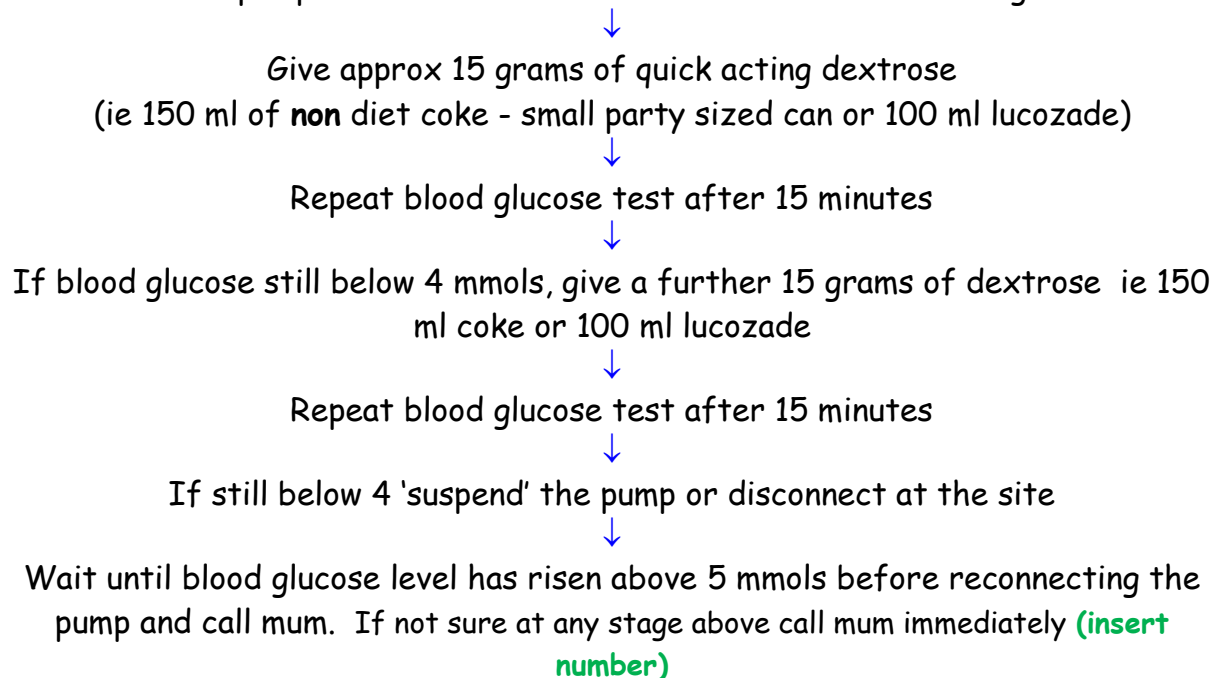
'insert name' will usually be able to test herself and act on a hypo without intervention. However, if 'insert name' feels so low she cannot test her own blood sugars a member of staff who has been trained to do a BG test must be called. If in doubt give 'insert name' the hypo treatment immediately and test when member of staff arrives or safely able (she can always give herself a bolus of insulin to cover the hypo treatment if she is not low.)

See below for instructions:

**If the blood glucose is less than 4 mmols/L, follow the '15' rule**

**If 'insert name' is unconscious give Glucagon injection. Do not attempt to give food, drink or Glucogel. Suspend or disconnect the pump.**

If blood glucose is less than 4 mmols and 'insert name' is alert, **do not** suspend the pump as the first line treatment but do the following :



### Suspending the pump

The pump can be stopped with the suspend function. Suspend stops all basal and bolus insulin delivery. When the pump is resumed, the basal insulin will automatically restart. The pump will beep every 15 minutes to remind you that the pump is in suspend mode.

## Severe Hypoglycaemia - glucagon

If uncooperative 'insert name' may drink her coke/lucozade if you forcefully tell her she has to.

If drowsy/unconscious and/or unable to eat /drink, disconnect or suspend the pump (do not try to pull out her infusion set to do this; you may damage the pump and hurt 'insert name') and then :

1. Call 999
2. Give **Glucagon injection** (if trained) **which is kept in 'insert name' bag she carries with her and one is in the fridge in the office, follow instructions on inside of lid.**
3. Ring mum - Ask someone else to call mum immediately the injection is being given or been given on **insert numbers**

Stay with 'insert name' and watch her in case of vomiting or seizure. Keep checking her Blood Glucose level until it reaches 5 mmol.

### Glucagon :

Route:	Sub cut or Intramuscular
Dosage:	Full syringe
Site for:	Thigh

## Hyperglycemia (High Blood Sugar - **hyper**)

If '**insert name**' has a blood glucose level above the target range of 12 mmol, she should follow the **ABCC** for high blood glucose.

If this is before a PE lesson, please see exercise advice below.

She should follow the protocol below and be allowed to wait until her levels have come back to a healthy level below 10 mmol.

Call mum for further advice. (**insert numbers**)

'**insert name**' may need help to follow this protocol as she will find it hard to remember to retest at the right time etc.

If the blood glucose is above 12 mmol/L, follow the **ABCC** for high blood glucose

### **Assess**

Was a food bolus given within the last 2 hours?

If so, do nothing and retest blood glucose level again in 1 hour.

If not, then do the following :

Is the pump running?      Is there insulin in the pump?  
Is the infusion line leaking or damaged?      Is the needle/cannula OK?



### **Bolus**

Give a correction dose of insulin using the **Bolus Wizard** which aims to bring the levels down to 6.5 mmol



### **Check**

Check blood glucose level 1 hour after this correction bolus has been given.

If blood glucose level is lower than the previous value, no action is required



### **Change**

If blood glucose level is equal to or higher than the previous value, immediately telephone mum (**insert number**)

who will either give you more instructions or will come and change the set and site.



### Key pad lock

Lock keypad prevents accidental keypad presses. The only screen you can access is the STATUS screen. A locked keypad is automatically unlocked during the following:

- Battery insertion
- Alarms
- Alerts

### Supplies to be kept at School

- Fast-acting source of glucose - mini cans of full sugar coke and lucozade, Glucotabs, sports beans.
- Spare cannulas, reservoirs, batteries, dressings
- Spare insulin vial **in fridge**
- Glucagon Injection **in fridge**
- Spare blood glucose meter and strips and lancing device
- Extra snacks in case of additional exercise etc

## PE Sessions At School

'insert name' must test blood glucose level before all PE sessions.

- 'insert name' should not immediately do PE if over 14mmol; exercise only reduces blood sugars if insulin is present in the body. Instead she should give half a correction according to the bolus wizard on the pump, as in the above **ABBC protocol**, and only then can she join in. For further advice please call mum (*insert number*)
- 'insert name' needs to have carbs whilst exercising, this differs from sport to sport. She cannot have all the carbs at the beginning of the lesson, it needs to be during.
- 'insert name' needs to have her BG monitor and quick acting carbs near her at all times during PE lessons as she will need to test her BG.

For sessions which need the removal of her pump, ie contact sports, 'insert name' must not be off her pump for more than 1 hour. The pump must be kept in the container provided and be held by the PE instructor present where 'insert name' is. No buttons should be pressed nor should the pump be suspended at any time. Either her key worker or PE teacher must ensure she reconnects to the pump immediately at the end of the session as 'insert name' will forget.

*Please note that rules for PE will change as the term progresses or sports activities change. This is normal and necessary to keep 'insert name' healthy whilst doing sports. It is very important that 'insert name' take part in everything the other children do and feels confident and safe in doing so. 'insert name' can follow the rules for PE herself but may need a little extra time at the beginning of the session to do her BG test etc if these rules change, the laminated sheet in her PE bag will also be changed. Teachers can look at this sheet at any time for reference on the PE rules for different sessions.*

## PE RULES

<b>'insert name's PE Rules!</b>	
<b>BEFORE PE: Check BG</b> <i>Please tell 'insert name' as she will forget</i>	
Blood sugar	Action
UNDER <b>4</b> mmol/L <b>HYPO!</b>	Have hypo treatment (follow 15 minute rule for hypos) and wait until blood sugar is back over <b>4 mmol</b> before joining in with PE. Then follow <b>UNDER 8 mmol</b> rules.
UNDER <b>8</b> mmol/L	Have <b>20 cho</b> (carbs) ie 12 sports beans, 130 ml lucozade, pkt Haribo
OVER <b>8</b> mmol/L (under 10mmol)	Don't correct. Have <b>15 cho</b> ie 9 sports beans, 100 ml lucozade
OVER <b>10</b> mmol/L (under 14mmol)	Correct using bolus wizard. <b>10 cho</b> ie 6 sports beans.
Over <b>14</b> mmol/l	Do half correction, overriding bolus wizard
<b>After every 30 mins : check BG</b> <b>After PE : check BG</b>	
	Action
	<b>Cancel any temp basal setting pump back to normal 100% basal</b>

<b>PUMP Rules for contact sport</b>	
<b>WHAT TO DO WITH THE PUMP BEFORE YOU START</b>	
Activity	Action
<b>Football/Rugby/Hockey/netball</b>	Disconnect the pump and put it in the waterproof container. <b>GIVE TO PE TEACHER &amp; KEEP WITH BG KIT &amp; HYPO TREATMENT</b> for PE teacher to have with him/her wherever the lesson is held.

**For information purposes only**

Training Zone	Typical exercise	Effect on blood glucose
Non-training	A nice walk!	Little, perhaps a small fall
Aerobic	Jogging, swimming	Fall after 20-30 mins
Mixed	Running, cross training at Gym, Football, Rugby	Steady and marked fall
Anaerobic	Sprint running, Intense Squash match	Rising blood glucose!

## School Trips

To make sure 'insert name' can be fully included in all school trips, Mum will need prior notice of trips/focus day activities etc in order to discuss with the school and put into place any extra instructions ie extra snacks, pump settings for the day etc. There should be an adult on the trip who is fully trained in 'insert name's care.

'insert name' is able to carry out all technical functions of her pump for herself but needs reminding of when to do BG tests and also reminders regarding taking digestive enzymes and indeed giving herself insulin to cover her food. She also needs the adults around her to help in emergencies (for instance when a sudden hypoglycaemic attack occurs). 'insert name' may also need her infusion set changed and someone can be trained to assist 'insert name' to do this.

We presume that every effort will be made to include 'insert name' in all extracurricular opportunities. However, if school staff are concerned as to whether 'insert name' can be safely enabled to attend a trip, her parents will be advised prior to the event to enable a discussion as to how concerns can be addressed.

Useful information for staff members (a longer informative hand out and emergency Hypo and hyper handout) has been included below for photocopying etc.

**Signatures :**

**This Diabetes Medical Management Plan has been approved by:**

\_\_\_\_\_  
Diabetes Nurse Specialist

\_\_\_\_\_  
Date

I give permission to the trained diabetes personnel, and other designated staff members of **insert school name** to perform and carry out the diabetes care tasks as outlined by this Medical Management Plan. I also consent to the release of the information contained in this Diabetes Medical Management Plan to all staff members and other adults who have custodial care of my child and who may need to know this information to maintain my child's health and safety.

**Plan agreed by:**

\_\_\_\_\_  
**Insert school name**

\_\_\_\_\_  
Date

\_\_\_\_\_  
Student's Parent/Guardian

\_\_\_\_\_  
Date

**EMERGENCY TELEPHONE NUMBERS**

- Mum's name (mum) home – **insert number**
- Mum's mobile – **insert number**
- Dad's mobile mobile – **insert number**
  
- Insert name of doctor and name of Hospital (direct) – **insert number**
- Insert name of Hospital (switchboard) – **insert number**

# Insulin Dependent Type 1 Diabetes

## 'insert name'

### Insulin Pump

- not to be touched unless trained
- can be removed for some sports, kept dry and safe due to risk of damage (its expensive), but removed for no longer than 1 hour with half hourly tests
- might alarm and beep and needs attention when it does

### Hypo

(blood glucose low under 4mmol)

#### Possible symptoms

- alarm on pump saying low or predicted low
- dizzy, shaky and pale
- weakness and tiredness
- talking rubbish

#### Treatment

- do blood glucose test if able, to confirm level
- have one mini can full sugar coke in bag or 100 ml lucozade (not sport)
- wait + stay still, re-test after 15 minutes
- if still under 4 have another coke or lucozade
- phone mum INSERT NUMBER

### Hyper

(blood glucose high above 12 mmol)

#### Possible symptoms

- increased thirst
- feeling unwell + unable to think clearly
- alarm on pump saying high

#### Treatment

- do blood glucose to confirm level
- enter BG level into pump using the wizard and give insulin correction
- set alarm on pump and retest after one hour
- if level same or higher call home immediately
- if level lower carry on and retest BG an hour later

**Please keep this close to hand!**



'insert name'

**Call 999 if  
unresponsive and  
unable to eat**

**Mum mobile  
INSERT NUMBER  
if hypo or hyper  
or in need of any  
advice**

# Insulin Dependent Type 1 Diabetes – information sheet 'insert name'

Our bodies need insulin to take the energy from food, into our blood and then to the organs and muscles. If you have Type 1 Diabetes you have no insulin of your own. 'Insert name' uses an **insulin pump** which gives her a constant supply of insulin. Without it she would become very seriously ill very quickly.

'insert name' needs to give extra insulin from her pump when she eats; to do this she **counts the carbohydrate** in what she eats and puts that number into her pump. It tells her how much insulin she needs for that food at that time of day. This can be found on the food wrappers or 'insert name's' Ipod Touch application (in 'insert name's' bag). Without the carbohydrate count she is only guessing at what to tell her pump and things can go wrong. If she needs help she must call mum.

Exercise makes the muscles use the insulin faster and better and so increases the **risk of hypos (low blood sugars)**. 'insert name' will test her blood on a monitor before she eats and if she feels low or high. If she is low she will eat without giving insulin for the carbs. If she is high she will have extra insulin. **She HAS to take action if her blood sugars are low or high and she may need help to do so.**

'insert name' needs constant support to get this complicated 'adult sized' disease right. **She will need her mobile phone left on at all times and with her along with her BG kit and her hypo treatment or in easy reach at all times.** Not to do so is to risk a serious consequence to her health.

Please feel free to **call Mum for advice at any time.** We want to help make this a positive experience for 'insert name' and everyone else around her.

**In an emergency call 999 and tell the operator that 'insert name' has Insulin Dependent Type 1 Diabetes. Then call INSERT MUM'S MOBILE NUMBER and warn her mum that there is a problem.**

# EMERGENCY TELEPHONE NUMBERS

- Mum's name (mum) home – **insert number**
- Mum's mobile – **insert number**
- Dad's mobile mobile – **insert number**
  
- Insert name of doctor and name of Hospital (direct) – **insert number**
- Insert name of Hospital (switchboard) – **insert number**



# Please Read me!

'insert name'

Insulin Dependent Type 1 Diabetes  
(due to removal of pancreas)

**Hypo** (blood glucose low under 4mmol)

Possible symptoms

- alarm on pump saying low or predicted low
- dizzy, shaky and pale
- weakness and tiredness
- talking rubbish

Treatment

- do blood glucose test if able, to confirm level
- have one mini can full sugar coke in bag or 100 ml lucozade (not sport)
- wait + stay still, re-test after 15 minutes
- if still under 4 have another coke or lucozade
- phone mum 07912 376406



**Give Glucagon if unresponsive and/or unable to eat and call 999**

Mum mobile **INSERT NUMBER**

if hypo or hyper or in need of any advice

Example - please rewrite to fit your child/school

'INSERT NAME'

Year ??? - Class ???

Item	Parents responsibility	School's responsibility	Young person's responsibility when deemed competent	Paediatric Diabetes Specialist Nurse	School Nurse/School
<b>Individualised care plan</b>	Formulation of plan & to up date information when necessary	All school personnel to be aware of plan and what care it includes	Formulation of the plan and to up date information when necessary	Formulation of plan and provide training in order for information to disseminated Dietitian – food plan	
<b>Emergency Supply Box</b>	To provide box and contents and training on how to use the contents	To make accessible to child/YP/Staff To make parents aware when supplies low	To make parents aware when supplies low	To provide training as to the correct use of the box	
<b>Insulin Injection and Pump Supplies</b>	To provide all supplies of insulin, pens, needles, reservoirs and cannulas.	Provision of fridge space for spare supplies of insulin. Provide clean and private environment.	To make parents aware when supplies low	To guide parents as to when supplies may need to replenished	
<b>Blood glucose &amp; ketone testing supplies</b>	To provide supplies of lancets, blood glucose strips and quality control (Q.C) solutions To be aware when replenishment of supplies is	Provide correct storage of supplies where necessary and request for training when further required. Provide clean and private environment.	To make parents aware when supplies low	To provide training in order to initiate blood glucose testing	None

	necessary				
<b>Quality Control of Blood Glucose Meter</b>	Parents responsibility to carry out this according to local policy	None	None	To train parents to carry out as per local guidelines	To support if required
<b>Sharps Disposal</b>	To provide sharps bin (refer to local policy)	To make parents aware when sharps bin is 2/3 full	To make parents aware when 2/3 full		To provide parents with information about local policy
<b>Extra Food</b>	To provide food for snacks and exercise as required	To make parents aware if running out of snacks and exercise food. To give permission for YP to eat whenever required.	To make parents aware when requires more food supplies	Information can be included about supply during treatment	
<b>Risk Assessment</b>	To provide information to facilitate risk assessment	To initiate and complete risk assessment documentation	To participate in risk assessment where possible	To provide specialist information as required	To provide specialist information as required