Name:
NHS No:
DoB:

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INDIVIDUAL HEALTH CARE PLAN FOR A CHILD OR YOUNG PERSON IN THE EDUCATION SETTING WHO HAS **TYPE 1** DIABETES

This care plan has been updated in December 2019 and is currently in line with National and International Guidelines.

CONTENTS:

DEFINITIONS

IHCP	Individual Health Care Plan
CYP	Child or Young Person
HYPO	Hypoglycaemia
CHO	Carbohydrate
BG	Blood Glucose
CGM	Continuous Glucose Monitoring
FGS	Flash Glucose System

Name: NHS No: DoB:	NHS

This health care plan will capture the key information and actions that are required to support this child or young person (CYP) in school. Schools should make reasonable adjustments to facilitate prescribed medical care to allow a CYP with diabetes to participate in education on the same basis as their peers. This individual health care plan (IHCP) should be reviewed at least annually.

1. CHILD/YOUNG PERSON'S INFORMATION

a. *Child / Young Person Details*

Child's Name:				Year group:	
NHS number:				DoB:	
Nursery/School/College : Post code					
Child's Address: Town: County: Postcode					
Type of Diabetes:	Please Select	Date of Diagnosis:			
Other medical conditions:					
Allergies:					
Date:		Document to be Updated:			

b. *Family Contact Information*

Name		
Relationship		
Telephone Number	Home Work Mobile	
Email		
Name		
Relationship		
Telephone Number	Home Work Mobile	
Email		
Name		
Relationship		
Telephone Number	Home Work Mobile	
Email		

c. Essential Information Concerning This Child /Young Persons Health Needs

Contacts			
	Name	**Email**	**Contact Number**
Children's Diabetes Nurses:			
Other Team Contact:			
Consultant Paediatrician:			
General Practioner:			
Link Person in Education:			
Dietitian:			
Class Teacher:			
Health Visitor/School Nurse:			
SEN Co-ordinator:			
Other Relevant Teaching Staff:			
Other Relevant Professionals:			
Head teacher:			

This CYP has DIABETES, requiring treatment with (*check which applies):*

Multi-dose regime i.e. requires insulin with all meals:	☐	
Insulin Pump Therapy:	Please Select	
3 injections a day (no injections in school):	☐	
2 injections a day (no injections in school):	☐	
Other oral medication	Please Select	Please Select
Other injectable medication		Please Select
Other medication:		
Ignore page 13 of this IHCP: ☐		

CYP with Diabetes will have to attend clinic appointments to review their condition. Appointments are typically every 3 months, but may be more frequent .These appointments may require a full day's absence. Education authority staff should be released to attend the necessary diabetes training sessions, in accordance with national guidance.

2. MONITORING BLOOD GLUCOSE (BG) LEVELS

BG monitoring is essential to achieving optimal diabetes management and must be familiar to school personnel. CYP with diabetes can monitor Glucose levels by the following ways; continuous glucose monitoring (CGM), flash glucose monitoring (FGS) and using a blood glucose monitor.
Monitoring glucose levels are an essential part of daily management; where ever possible the CYP should be encouraged to take responsibility for managing their own medicines and blood glucose (BG) equipment in school. They should be allowed to carry their equipment with them at all times and their equipment must not be shared.

a. Continuous Glucose Monitoring (CGM)

CGM is a small waterproof sensor that is inserted under the skin which measures glucose in the interstitial tissue every few minutes. The sensor sends the results to a transmitter. Unlike BG checking where you get a single measurement, with CGM, a graph is seen showing glucose levels with trends. Some sensors are linked to insulin pumps, some are stand-alone CGM. The trends give insight into the speed and direction the glucose is changing. Alarms can be set to alert.

Examples of interpreting real-time CGM:
Medtronic (CGMS)

Trend Arrow	What this means
↑ or ↓	Sensor Glucose has been rising or falling by about 1-2 mmol/L over the last 20 minutes
↑↑ or ↓↓	Sensor Glucose has rising or falling by about 2-3 mmol/L over the last 20 minutes
↑↑↑ or ↓↓↓	Sensor Glucose has been rising or falling by about 3 mmol/L over the last 20 minutes

Dexcom G4/G5/G6 (CGMS)

Trend Arrow G5 App	Trend Arrow G4/5 Receiver	What this means
		Glucose rising 0.1-0.2mmol/L each minute or up to 2.5mmol/L in 15 minutes.
		Glucose rapidly rising more than 0.2mmol/L each minute or more than 2.5mmol/L in 15 minutes.
		Glucose is slowly falling 0.06-0.1 mmol/L each minute or up to 1.7mmol/L in 15 minutes.
		Glucose is falling 0.1-0.2mmol/L each minute or up to 2.5mmol/L in 15 minutes.
		Glucose is rapidly falling more than 0.2mmol/L each minute or more than 2.5mmol/L in 15 minutes.
		Glucose slowly rising 0.06-0.1 mmol/L each minute or up to 1.7mmol/L in 15 minutes.
		Glucose is steady. Not increasing/ decreasing more than 0.06mmo/L per minute or up to 0.9mmol/L in 15 minutes.

b. *Flash Glucose Monitoring (FGS)*

This enables the glucose levels to be monitored by holding a handheld device (which is also a blood glucose monitor) over the sensor. This shows real-time glucose levels rather than BG and therefore there will always be a time lag in these glucose readings. Trend arrows show whether the levels are rising, decreasing or remaining stable. FGS do not continuously send glucose measurements to the reader.

Examples of interpreting:
Freestyle Libre Flash Glucose Monitor (FGS)

Trend Arrows	What this means
	**Glucose is rising quickly (more than 0.1mmol/L per minute)**
	**Glucose is rising (between 0.06 and 0.1mmol/L per minute)**
	**Glucose is changing slowly (less than 0.06mmoll/L per minute**
	**Glucose is falling (between 0.06 and 0.1mmol/L per minute)**
	**Glucose is falling quickly (more than 0.1mmol/L per minute)**
	The Glucose trend arrow may not always appear with your reading

This CYP is using the following device: Please Select if other please specify

c. *Blood glucose monitoring*

All CYP should have access to a blood glucose monitor whilst in the education setting. Some monitors may have a bolus advisor incorporated in the device. Some will check blood ketone levels as well, these are essential if on insulin pump therapy.

(*Check which applies)*

BG testing to be carried out by a trained adult, using a Fastclix / Multiclix device.	☐
This child requires supervision with blood glucose monitoring.	☐
This CYP is independent in BG testing.	☐
This CYP may use CGMS	Please Select
This CYP may use flash glucose monitoring	☐
This CYP may use a meter with a bolus calculator	☐

BG checking should be carried out:

- In class or if preferred, in a clean private area with hand washing facilities - **Not in a toilet.**
- Hands to be washed prior to the test.
- Blood glucose targets pre meal - mmol/L and - mmol/L 2 hours after meals.
- Blood glucose testing lancets and blood glucose strips should be disposed of safely.

There are a wide range of different blood glucose meters available, some have a built in automated bolus calculator, which will aid patients in determine CHO and correction doses. Some CYP may use a mobile device to dose insulin.

3. INSULIN ADMINISTRATION WITH MEALS

Check if applies ☐ if not, go to section 5

Insulin can be delivered either by a pen device, or insulin pump therapy. The aim of the insulin pump is to mimic the pancreas as daily insulin requirements vary in each individual. They can either be attached to the wearer by a length of clear tubing (an infusion set) or as an adhesive patch pump attached to the skin by a small cannula.

The pump is set to deliver a continuous dose of fast-acting insulin over a 24 hour period (BASAL RATE); this basal rate will keep the BG stable when not eating. Extra fast insulin can be given via the pump, when the CYP is eating food and matched to the amount of carbohydrate that is eaten (BOLUS INSULIN). This is done by pushing buttons on the pump/handset (See page 14 additional information). Extra fast acting insulin can also be given as a CORRECTION DOSE if BG is above target range.

(*Check which applies)*

Insulin to be administered by a suitably trained adult, using a pen needle that complies with national and local sharps policy	☐
Supervision is required during insulin injection administration	☐
This young person is independent, and can self-administer the insulin injection	☐
This CYP is on an insulin pump (see further information below and section 5 (page 8)	☐

The CYP using either MDI or Insulin Pump therapy will need to count CHO and calculate insulin doses which ideally needs to be administered pre-meal.

(*Check which applies)*

They have a specific Insulin to carbohydrate (CHO) ratio (I:C)	☐
They are on set doses of insulin	☐

This procedure should be carried out:

- In class, or if preferred in a clean private area with hand washing facilities
- Should always use their own injection device; or sets.
- All used needles should be disposed of in accordance with the school's local policy

4. HEALTHY EATING AND CARBOHYDRATE (CHO) COUNTING

All CYP need a healthy and balanced diet for optimum growth and development. The meals eaten throughout a school day can make up a large proportion of some children's food intake for the whole day, perhaps including breakfast clubs, break times, lunch and after school clubs. As it's primarily the carbohydrate in food that raises the blood glucose level, it is therefore vitally important to count the carbohydrate accurately and administer the correct amount of insulin, the basis of good diabetes control. In some individuals the impact of dietary fat and protein should be considered in the calculation of the meal bolus dose.

A meeting can then be arranged with appropriate members of staff and parents to discuss who and how best supervision at 'meal times' can be implemented. In certain circumstances, it may be necessary for the dietitian to train staff in the basics of carbohydrate counting so they can support the child effectively.

The family will have received in-depth education regarding healthy eating and CHO counting from the diabetes team, and the CYP with diabetes should be allowed choice of whether to have a packed lunch or school meal. The process of CHO counting can be made easy utilising technology of their 'smart' phones.

5. INSULIN ADMINISTRATION

Delivered via pen device: ☐ Delivered via insulin pump: ☐

Insulin Name	Time	Process
Please Select		
Other:		
Insulin Name	Time	Process
Please Select		
Other:		

NOTE: See 8 ☐

6. SUGGESTED DAILY ROUTINE

	Time	Note
Arrive School		
Morning Break		
Lunch		
Afternoon Break		
School finish		
Other		

Please refer to 'Home-school' communication diary ☐
Please refer to School planner ☐

7. SPORTING ACTIVITY/ DAY TRIPS AND RESIDENTIAL VISITS

Governing bodies should ensure that risk assessments, planning and arrangements are clear to ensure this CYP has the opportunity to participate in all sporting activities. School should ensure reasonable adjustments as required. Exercise will generally lower BG levels. In some situations insulin regime may be tailored to the activity.
Checking BG levels pre exercise is essential, and always consider what type of activity is being undertaken and what changes need to be made. For example:

Before exercise:

BG Level	Example of CHO and BG Management	For this CYP:
<5 mmol/L (<90 mg/dL)	10-20g of carbohydrates before starting any exercise Delay exercise until blood glucose is above 5 mmol/l and rising	
5-6.9 mmol/L (90-124 mg/dL)	10-20g of carbohydrates before starting aerobic exercise	
7-10 mmol/L (126-180 mg/dL)	Carbohydrates may not be needed before start but soon afterwards Aerobic and anaerobic exercise can be started	
10.1- 14 mmol/L (182-252 mg/dL)	Aerobic and anaerobic exercise can be started	
>14 mmol/L (>252 mg/dL)	If the High BG is unexplained, blood ketones should be checked. If B-Ketones >0.6 mmol/ actions are required before starting any exercise. Please see page 12 & 13 of the IHCP	

* If BG greater than 14 and/or Ketones above 0.6 mmol/l, follow advice on page 12/13 . Do not begin exercise until ketones less than 0.5 mmol/l.
Examples of Aerobic exercise in school: Football; Rugby; Hockey; Cross country
Examples of Anaerobic exercise in school: Sprinting: Gymnastics
Snacks should be available during any form of physical activity

After exercise:

Specific instructions for post exercise for this CYP:	

Check bloods immediately post exercise and before leaving school. Hypoglycaemia with exercise may occur at the time of the activity or may be delayed 7-11 hours later

Specific instructions for exercise for this CYP If on Insulin Pump therapy:	

If regularly having hypos in school after PE, school to discuss with family so changes can be made.

Name:
NHS No:
DoB:

8. HYPOGLYCAEMIA

Hypoglycaemia ('Hypo') is best defined as a fall in BG level that exposes the CYP to potential harm and there may be no signs or numerical definition of hypoglycaemia for al CYP and situations.
Hypos are the commonest acute complication of Type 1 Diabetes. Blood glucose of below _____ mmol/L requires urgent attention.
It is important that all carers can recognise warning signs of hypoglycaemia and treat the low BG immediately and appropriately. A 'First Aid' hypo management pack must always be available.
Hypos can be symptomatic or asymptomatic, and are described as either mild or severe.
In rare circumstances an appropriate member of staff in school may be trained to administer the GLUCAGON injection. (resource 7)
Mild hypos events should be treated with oral glucose _____ g glucose. The aim is to treat, and restore the BG level to above _____ mmol/L.
Depending on the circumstances, this rapid acting glucose should be followed up by additional CHO to prevent reoccurrence of hypoglycaemia within 10-15 minutes.
Severe Hypos may result in loss of consciousness and / or a seizure. School personnel should have clear instructions for managing an episode of severe hypoglycaemia (see page 11) and use of rescue medication.

BG: Below 4 mmol/l.

INDIVIDUAL HYPO-SYMPTOMS FOR THIS CYP ARE:	Pale ☐ Sudden Change of personality ☐ Crying ☐ Moody ☐ Hungry ☐	Poor Concentration ☐ Sleepy ☐ Shaking ☐ CYP may say: _____ Hypo unawareness	Other:

How to treat a hypo:

- If possible, check BG to confirm hypo, and treat promptly: see 8a. If on FGS or CGMS.
- Do not send this child or young person out of class unaccompanied to treat a hypo.

A first aid management pack with fast acting glucose and long acting CHO should be kept in school containing fast acting glucose and long acting carbohydrate. Staff, and the CYP should be aware of where this is kept and it should be taken with them around the school premises; if leaving the school site; or in the event of a school emergency. It is the parent's responsibility to ensure this emergency box is adequately stocked; independent young people will carry hypo remedies with them.

Low BG levels can be caused by:

- Excess insulin
- Missed meal or Less CHO eaten than expected
- Exercise
- Excitement
- Hot weather
- Sleep
- Alcohol ingestion.

Name:
NHS No:
DoB:

a. Treatment of Hypoglycaemia

BG BELOW [ ] MMOL/L

MILD/ MODERATE

Can he/she eat & drink independently?

PERSONALISED TREATMENT PLAN
FOLLOW STEPS 1-4

Step 1. Give fast acting rapidly absorbed simple CHO promptly.
Step 2. Re-test BG 15 minutes later
Step 3. If BG still below [ ] mmol/l:

If BG above [ ] mmol/l:

Step 4
For some CYP an extra snack may be required (especially if the next meal is 1-2 hours away)

STEP 1

STEP 4

SEVERE

Is he/she semi-conscious; unconscious; convulsing or unable to take anything by mouth?

PERSONALISED TREATMENT PLAN

- *Place the CYP in the recovery position*
- Nil by mouth
- DIAL 999
- If a trained and competent member of staff is available, to administer the Glucagon injection (see resource 7):
  - 0.5mg (half dose) for less than 8 years old (or weight less than 25kg)
  - 1mg (full dose): if over 8 years of age(or weight more than 25kg.)
- Never leave him/her alone
- Contact parents.
- When fully awake follow steps 1-4 above.
- A severe hypo may cause vomiting.
- On recovery the CYP should be taken home by

Additional information regarding hypoglycaemia for this CYP:	

FOLLOWING RECOVERY CONSIDER WHAT HAS CAUSED THE HYPO

Name:
NHS No:
DoB:

9. HYPERGLYCAEMIA

(High blood glucose)

Children and young people who have with diabetes may experience high blood glucose (hyperglycaemia) when the blood glucose levels are [redacted] mmol/L. The CYP may display the following symptoms:

Thirsty; frequent trips to the toilet; poor concentration; urinary accidents; mood changes

High BG levels can occur for the following reasons:

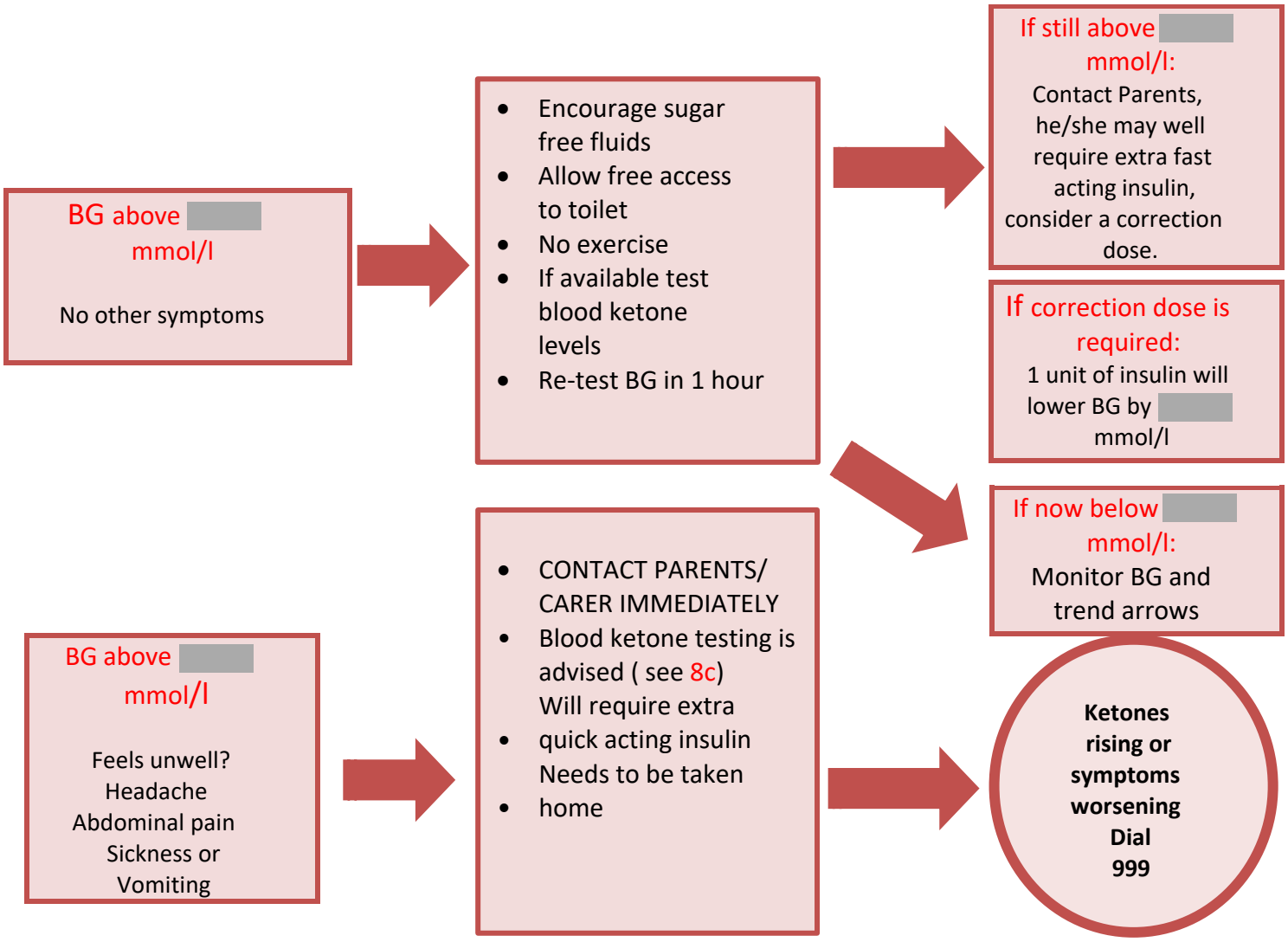
- Missed insulin dose
- Illness
- Extra CHO eaten
- Stress
- Hormones
- Injection site issues
- Less activity than normal

Please consider the cause before following advice from the flowcharts.

***** IF THIS CYP IS ON INSULIN PUMP THERAPY PLEASE REFER DIRECTLY TO 9b *****

If the child/young person is well, there is no need for them to be sent home, but parents/guardian should be informed at the end of the day that the child/young person has had symptoms of high blood glucose

a. Treatment of Hyperglycaemia For A Child/Young Person On Injections

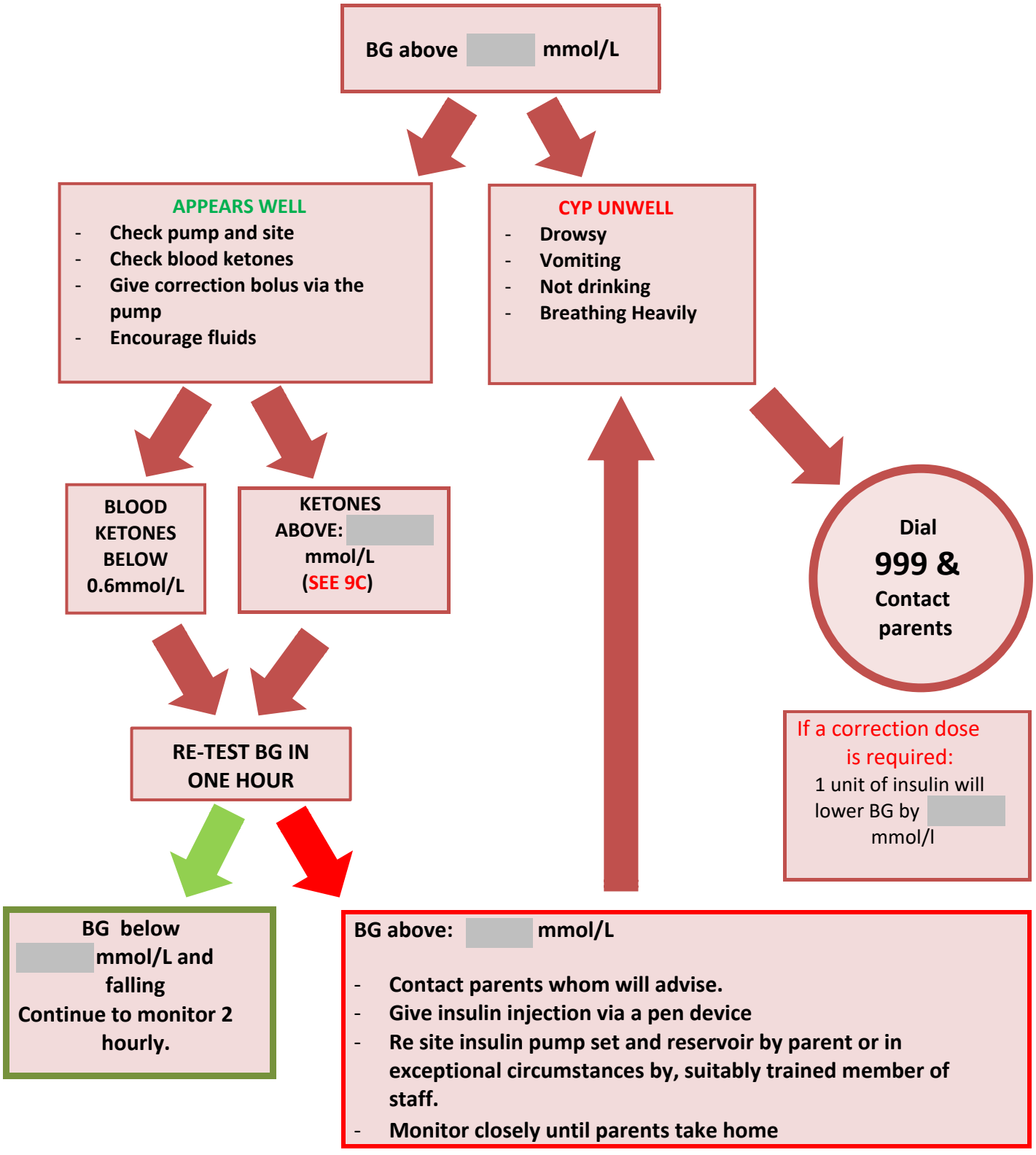


Name:
NHS No:
DoB:

Additional information regarding hyperglycaemia for this CYP:	

IGNORE THIS PAGE ☐

b. Treatment of Hyperglycaemia for a Child/Young Person on Pump Therapy



c. Blood β -Ketone Testing Guide:

Below 0.6mmol/L — **Normal range - low to 0.5mmol/L**
Between 0.6-1.5mmol/L — **Potential problems - SEEK ADVICE - 0.6 to 1.5mmol/L**
Above 1.5mmol/L — **High risk - SEEK UGENT ADVICE - 1.6mmol/L and above**

10. ADDITIONAL INFORMATION

Additional information regarding β Blood –Ketone testing for this CYP:	

- School to be kept informed of any changes in this child or young person's management.
- School exams or other assessment situations are associated with stress and increased risk of acute transient episodes of hypoglycaemia and hyperglycaemia that can affect performance. Specific arrangements may need to be in place for exams.
- The CYP with diabetes may be encouraged to wear identification stating they have diabetes. These are in the form of a bracelet, necklace, watch or medical alert card.
- There is no specific age at which a CYP with diabetes should be expected to take full responsibility for their diabetes in school.
- Specific extra support may be required for the CYP regarding educational, social and emotional needs- for example: during periods of instability: during exams: catching up with lessons after periods of absence: and counselling sessions.
- Storage of medication and supplies in school should be kept in line with local school policies. Teachers and school personnel have to be aware that the CYP with diabetes should have access to their devices and medication whenever needed.
- This CYP may carry his/her mobile phone to access diabetes 'apps' to aid management in school.
- This CYP will need to attend regular medical appointments. These should be classed as 'authorised absence' and excluded from any attendance monitoring.
- A CYP with diabetes should be encouraged to be included in all activities in the educational setting.

Please use the box below for any additional information for this CYP, and document what is specifically important for him/ her:

This IHCP has been initiated and updated in consultation with the CYP, family; diabetes specialist nurse and a member of staff from the educational setting.

	Name	Signatures	Date
Young person			
Parents/Guardian			
Parents agreement to administration of medicine as documented on page 3 and 4			
Diabetes Nurse Specialist:			
School Representative:			
Health visitor/ School Nurse:			

11. CHECKLIST

First aid hypoglycaemia management pack	☐	Insulin pen and appropriate pen needles	☐
Glucose Gel (e.g. GlucoGel®/Dextrogel®)	☐	Cannula and reservoir for pump set change	☐
Finger prick device, BG monitor and strips	☐	Spare battery	☐
Ketone testing monitor and strips	☐	Up to date care plan	☐
Snacks	☐		☐
Sharps bin	☐		☐

12. TRAINING LOG

Schools are responsible for adequately training their personnel about diabetes but the content of the training is the responsibility of the health care team and parents.

Staff Name	**Training Delivered**	**Trainer**	**Date**

13. ADDITIONAL NOTES

13. ADDITIONAL NOTES

14. USEFUL RESOURCES

1) **Carbs and Cals** App:
https://www.carbsandcals.com/app/app

2) **Carbs and Cals** book, by Chris Cheyette and Yello Balolia (Chello Publishing Ltd, ISBN no: 978-0-9564430-0-7) -
https://www.carbsandcals.com/

3) **Department of Education**
Supporting Pupils at School with Medical Conditions:
https://www.gov.uk/government/publications/supporting-pupils-at-school-withmedical-conditions--3

4) **Diabetes UK**
Diabetes in Schools Resources:
https://www.diabetes.org.uk/Guide-to-diabetes/Schools/Diabetes-in-schoolsresources/
Residential and Exams Packs:
https://www.diabetes.org.uk/...to-diabetes/...diabetes/.../school-trip-and-exam-resource

5) **DigiBete** - a place to help young people and families to manage Type 1 Diabetes
www.digibete.org

6) **Health and Safety (Sharp Instruments in Healthcare) Regulations 2013**
The relevant guidance can be accessed via the following link:
www.HSE.gov.uk/healthservices/index.htm

7) **How to Give an Injection of Glucagon (Glucogen) Video**
https://www.digibete.org/video/give-injection-glucagon/

8) **JDRF (Juvenile Diabetes Research Foundation)**
General Information Packs and Leaflets:
https://jdrf.org.uk/living-with-type-1/information-packs-and-leaflets/
Managing Type 1 diabetes effectively through University:
http://uni.jdrf.org.uk/

9) **National Children and Young People's Diabetes Network and JDRF E-learning module - Basic and Advanced Level**
http://type1diabetestraining.co.uk/
https://jdrf.org.uk/for-professionals/school-pack/schools-e-learning-module/
It is recommended that all staff complete the Basic Level. Staff who are carrying out blood glucose tests and giving insulin (either injections or via a pump) should also complete the Advanced Level.

15. REFERENCES:

An Individual Health Care Plan (IHCP) for a child or young person in an education setting who has diabetes within the Children and Young People´s North West Diabetes Network (CYPNWDN) culminating in a national individual health care plan - M. Carson, D. Anderson, S. Singleton - ISPAD 2016: http://medialibrary.ispad.cyim.com/mediatheque/media.aspx?mediaId=17742&channel=9857

Diabetes Guidelines for Schools, Colleges and Early Years Settings - East of England CYP Diabetes Network (versions 2013,2014,2018)

ISPAD Clinical Practice Consensus Guidelines 2018: https://www.ispad.org/page/ISPADGuidelines2018

Making every young person with diabetes matter. Department of Health, 2007

Managing Medicines in school and early Years Setting. Department of Health, 2005

Meeting Health Needs in Education and other Community Settings. RCN. January 2018

NICE clinical guideline NG18: Diabetes (type 1 and type 2) in children and young people, diagnosis and management, August 2015

Statutory Framework for Early Years Foundation Stage. Setting the standards for learning, development and care of children from birth to five.. Dept of Education, March 2017

Supporting pupils at school with medical conditions. Department of Education. September 2014
https://www.gov.uk/government/publications/supporting-pupils-at-school-withmedical-conditions--3

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at the Nursing Standard Nurse Awards 2015