

# **Diabetes Management for Inpatients**

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## 1 Purpose

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- The main aim of this document is to set standards in practice to ensure safe effective care of patients with Diabetes.
- This guideline will support medical and nursing staff through the process required to ensure patient safety is maintained in relation to Diabetes management.



Specific areas of this guideline relevant to young people (12-18 years old) are referred to as **Diabetes Management Young People (12-18 years old)**. All staff must read and follow all parts of this guideline.

## 2 Related documents

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This guideline also refers to:-

- ✓ Hypoglycaemia Guidelines
- ✓ Physical Health and Wellbeing Policy
- ✓ NEWS – National Early Warning Score and the Early detection and Management of the Deteriorating Patient
- ✓ Patients own medicine Procedure
- ✓ Prescribing for potential medical emergencies to this list [link here](#)
- ✓ Medicines Safety Series 6 insulin [here](#)
- ✓ SBARD [SBARD Withdrawing Insulin from Pre-Filled Pen Devices](#)
- ✓ Insulin PSA Response poster [Insulin PSA Response Poster](#)

## 3 Introduction

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Diabetes mellitus is a condition characterised by raised blood glucose concentration. It is caused by absolute or relative lack of the hormone insulin. This means that insulin is not being produced by the pancreas or that there is insufficient insulin or insulin action for the body's needs.

### 3.1 Type 1 Diabetes

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Type 1 Diabetes is caused by autoimmune destruction of the insulin producing Beta cells of the pancreas, resulting in ABSOLUTE insulin deficiency. Patients will always require Insulin therapy. Patients with Type 1 Diabetes are at risk of developing a serious acute metabolic complication called Diabetic Ketoacidosis (DKA). This can occur if blood glucose levels are persistently high in an unwell patient or if insulin is omitted regularly. Insulin should NEVER be stopped in patients with Type 1 Diabetes.

## 3.2 Type 2 Diabetes

Type 2 Diabetes is caused by both impaired insulin secretion and resistance to the action of insulin at the target cells. Patients are usually managed with diet and/or oral medications. However, patients with Type 2 diabetes may require insulin therapy as their disease progresses.

## 4 Diabetes Management

### 4.1 Diabetes Guidance: essential care required on admission to an inpatient unit



All patients with type 1 and type 2 diabetes on admission, including during the out of hours period to an inpatient unit, must have the following completed:

- Physical examination.
- A full set of physiological observations recorded including blood glucose.
- A urine / serum ketones measurement recorded if BM above 15 mmols/L.
- An assessment for 'red flags' (see 5.1) with immediate transfer to Acute Trust if present.
- A referral to Acute Trust Diabetologist/Medical Registrar on call if medical advice needed.
- Establish compliance / when last dose of diabetes medication was given.
- Review and prescribe current diabetes medication and include management of hypoglycaemia. (see hypoglycaemia guideline)
- Administer appropriate diabetes medication as prescribed
- If a patient brings in their own insulin on admission and there are concerns about suitability contact pharmacy (contact on call pharmacist if out of hours).
- Record initial assessment and treatment in the Physical Health Casenote on PARIS.



#### Diabetes Management Young People (12-18 years old)

On admission, in addition young people with type 1 and type 2 diabetes should be referred to the Trust Dietetic Service for dietary support. The catering department should be informed and liaise with the Dietitian.

### 4.2 Diabetes Guidance for Doctors

All patients with Insulin treated diabetes **MUST** be seen by a doctor within 4 hours of admission including during the out of hours period.

- Review Patient Data.
- Perform Physical Review and Examination of the patient.
- Assess risk of DKA or HHS and consider admission to Acute Trust.
- Establish usual insulin regime, including time when Insulin dose was last administered as stat doses may be required.
- In the case of carbohydrate counting (DAFNE) patients, establish the range of doses usually administered and evaluate the individual patient's risk of self harm behaviours.
- **If you are able to establish the insulin regime**, prescribe and ensure dextrose 40% oral gel and Glucagon 1mg IM is included. If necessary prescribe a stat dose of insulin, ensure insulin is available and inform the nursing staff.

- **If you are able to establish the oral medication regime and the patient is prescribed gliclazide or combination of oral hypoglycaemic agents**, prescribe and ensure dextrose 40% oral gel and Glucagon 1mg IM is included (see Prescribing for potential medical emergencies to this section [link here](#)).
- If the patient has brought their own supply of insulin into hospital, this must be assessed according to Trust Policy (Patient Own Drugs Procedure), bearing in mind that insulin pens are unlikely to be labelled with the patients details. However the name of the insulin can be checked on the cartridge inside the pen. It is down to professional discretion as to whether to use the insulin or obtain a further supply.
- **If you are unable to establish the insulin regime** in a timely fashion or the patient is at risk of self harm, please remember that patients will generally still require insulin to prevent hyperglycaemia. This is particularly important in patients with Type 1 Diabetes. It is imperative that advice is sought immediately from the Diabetologist or Medical Registrar on call at your local acute trust on the patient's management.

## 4.3 Monitoring

### Blood Glucose Monitoring

Restoring blood glucose to as near normal as possible is important to reduce diabetes related complications and for monitoring treatment effects. This can be performed using both blood glucose meters and laboratory tests.

(Refer to Guidelines for Blood Glucose Monitoring 0058.v2 and Royal Marsden Manual Online).

Frequency of monitoring will depend on the type of diabetes and the treatment regime. It is individual to the patient and needs to be agreed and clearly documented within the intervention plan including a rationale for monitoring.

Some patients may use an insulin pump which requires regular monitoring of blood glucose levels. Nursing staff need to ensure regular blood glucose levels are documented and action taken accordingly in order to reduce risk of hypoglycaemia and hyperglycaemia. If unsure please refer to the patients known diabetic specialist.

Some patients may utilise "Flash Monitoring". These readings should be accepted unless the patient's intervention plan requires intervention based on blood glucose readings, (e.g. additional insulin to be administered). If an intervention is required then the BM must be validated / checked using the traditional finger prick test.

A blood glucose monitoring chart must be used and has been developed by the Safe Medication practice group. If the patient is prescribed Insulin then blood glucose monitoring must be recorded on the second page of the Insulin prescription chart.

It is essential that wards ensure that they have access to appropriate administration and monitoring equipment (refer to Diabetes Management Template in Cardea).



It is essential to establish the patient's insulin regime as part of the initial physical health assessment on admission. Patients must have their insulin prescribed on admission to an inpatient unit. Advice should be sought immediately if staff are unsure of the patient's insulin regime.

## 4.4 Prescribing and Administration of insulin

When prescribing and administering insulin the following standards are essential and must be adhered to:

- NEVER use abbreviations. The term 'units' must always be used.
- ALWAYS prescribe insulin by brand.
- ALWAYS specify device used (cartridges, disposable pens, vials or insulin pumps). This information should be available on admission from the patient and / or carer / family member. If not available contact the patient's GP.
- ALWAYS check with the patient what insulin they are using and show them the pen/ container and confirm that the patient is expecting the product.
- ALWAYS prime the device before using as instructed by the manufacturer
- NEVER extract insulin from a pre-filled pen using a syringe
- NEVER draw up insulin from a cartridge using a syringe
- NEVER use an IV/IM syringe to draw up insulin
- ALWAYS use an insulin syringe to draw up insulin from a vial
- NEVER dilute insulin before administration



Insulin has been identified on the list of critical medicines where timeliness of administration is crucial. Staff should be aware of the importance of prescribing and administering insulin and report immediately to medical staff, any omitted or delayed administration issues.



It is critical that on admission, during the review of the patient's current insulin regime, medical staff prescribe treatments to manage hypoglycaemia alongside insulin therapy. Refer to the Hypoglycaemia section for the prescribing and administration of dextrose 40% oral gel and glucagon.

### Insulin Prescribing and Administration Chart

The Trust has a standard Insulin Prescription and Administration Chart that is available from Cardea (LP77766). The Pharmacy Team have developed a set of guidance notes to assist in completing the chart, which are available to staff on InTouch. If a patient is prescribed insulin, this must be prescribed on BOTH the Insulin Prescribing and Administration chart as well as the Drug Prescription and Administration Record Chart may be used.

### Insulin Injection Technique / choice of needles

Refer to [Royal Marsden Manual](#) Online for injection techniques and sites recommended for subcutaneous injections. The Trust advocates the use of the [BD Auto Shield Duo Safety Pen Needle](#). Always dispose of needles into a sharps bin.

## Storage of insulin

Care must be taken when storing insulin.

- NEVER freeze insulin (frozen insulin should be disposed of appropriately).
- NEVER use insulin beyond the manufacturer's expiry date stamped on the vial, pen or cartridge.
- NEVER expose insulin to direct heat or light. Avoid direct sunlight and heat e.g. near radiators, fires or window sills. If going outside in hot or cold weather store insulin in an insulated container.
- ALWAYS inspect insulin prior to use:
  - "Solution" insulins should be clear; do not use if they have a cloudy appearance.
  - "Suspension" insulins should be uniformly cloudy following agitation; do not use if there are clumps of powder or the powder is not uniformly suspended after shaking.
- ALWAYS store unopened insulin in a refrigerator at a temperature between 2-8°C.
- ALWAYS mark open insulin with the date of opening and store below 25 degrees in line with manufacturers guidance.
- ALWAYS store insulin without needle attached.

## Location of emergency insulin

Insulin for use in an emergency is stored on all inpatient sites. The types of insulin available are:

- Novo Rapid (Insulin Aspart) 3ml Flex Pen. This is short acting Insulin with fast onset of action; this is normally prescribed at meal times.
- Lantus (Insulin Glargine) 3ml SoloStar Pen. This is long acting Insulin with a prolonged duration of action; this is normally prescribed once a day.

Site	Location
Cross Lane Hospital, Scarborough	Danby Ward
Briary Wing, Harrogate District Hospital	Cedar Ward
Lanchester Road Hospital, Durham	Farnham Ward
Roseberry Park Hospital, Middlesbrough	Bransdale Ward
Sandwell Park Hospital, Hartlepool	Westerdale North
West Park Hospital, Darlington	Elm Ward
Peppermill Court, York	Minster Ward

## 4.5 Nutritional Management

All health care professionals are expected to support patients with their dietary management of diabetes from diagnosis onwards. Support should include:

- guidance at meal times regarding healthy options/balanced choice on ward menu
- guidance regarding snacks and fluids consumed both on ward and when out on leave
- signposting to British Dietetic Association and Diabetes UK websites for up to date dietary advice
- referral to Dietetic Service if, and when, appropriate

Dietetic service can support education around:

- The effects of different foods on diabetes and blood sugar control
- Choice of content, timing and amount of snacks taken between meals and at bedtime
- Healthy eating advice to help reduce diabetes associated risk factors (low glycaemic index foods, fruit and vegetables, types and amount of fat).

(NICE 2014)

For additional patient education information, follow the links below.

[For information on Type 1 Diabetes](#)

[For Information on Type 2 Diabetes](#)

[For information on Glycaemic Index](#)

If further advice is required, refer patient to the Dietetic Service.

If a patient is admitted to hospital and uses DAFNE (dose adjustment for normal eating) it is important to assess suitability to continue and to seek specialist advice from the diabetes team within the acute hospital.



#### **Diabetes Management Young People (12-18 years old)**

Young people with diabetes should have their weight and height monitored to ensure their weight is stable within a healthy BMI.



#### **Diabetes Management Young People (12-18 years old)**

Young people with type 2 diabetes should be referred to the Dietitian for advice regarding weight management including calculating BMI and offering advice on healthy eating to reduce hyperglycaemia and CVD risk and where appropriate to promote weight loss.

## **4.6 Exercise**

It is important to advise patients that physical activity can reduce complications of diabetes risk in the medium and longer term.

Provide information / refer to Occupational Therapy / Fitness team / health living advisors for further advice on:

- Appropriate intensity and frequency of physical activity.
- Appropriate types of activities.



- Appropriate hypoglycaemia management plan for attendance at activities
- Signpost for further information / management

## 5 Diabetic emergency situations.

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### 5.1.1 Hypoglycaemia

Hypoglycaemia is a condition which occurs when the blood glucose levels are too low to provide enough energy for the body's activities (Diabetes UK). Hypoglycaemia results from an imbalance between glucose supply, glucose utilisation and current insulin levels.

A blood glucose level of less than 4mmol/L should be considered as a 'hypoglycaemia'.

Refer to hypoglycaemia guidelines.

Seek Medical advice.

#### **Hypoglycaemia presentation:**

The following are signs and symptoms of a patient presenting with a 'hypo':

- sweating
- shaking
- dizzy
- hungry
- tired
- irritable (moody)
- anxious
- confused
- pallor
- palpitations
- headaches

#### **Causes of hypoglycaemia:**

- missed or late meals
- too much insulin
- not enough carbohydrate in meals
- unplanned exercise
- large amount of alcohol especially without food
- acute illness including vomiting
- sometimes there is no obvious cause

#### **Treatment of hypoglycaemia:**

- Treatment will depend on the severity of symptoms and results of the blood glucose reading.
- Assess if the patient is conscious and able to swallow. A treatment of hypoglycaemia flow chart has been developed as a quick reference guide and should be followed by all healthcare professionals, displayed in all inpatient clinic settings and available in the pharmacy emergency drug bag (**Appendix 1**).
- All patients prescribed insulin, monotherapy with Gliclazide or a combination of oral agents should have Dextrose 40% oral gel and Glucagon 1mg prescribed for the treatment of hypoglycaemia.
- All inpatient wards should have access to emergency drug bags which contain the following and can be administered without a prescription in an emergency that threatens life:
  - Dextrose 40% oral gel tubes (One box contains 3x25g) (Brands include Glucogel, Hypostop and Dextrojel)
  - Glucagon injection 1mg for subcutaneous or intramuscular use (Glucagon needs to be reconstituted prior to injecting. The diluent is held alongside the Glucagon)



It is critical that on admission, during the review of the patient's current insulin regime, medical staff prescribe treatments to manage hypoglycaemia alongside insulin therapy.



#### **Diabetes Management Young People (12-18 years old)**

Refer to flowchart in **Appendix 2** for the management of hypoglycaemia in young people.

### **5.1.2 Hyperglycaemia**

Hyperglycaemia is a condition which occurs when the blood glucose levels are too high. A blood glucose level of more than 7.0mmol/L before a meal and above 8.5mmol/L two hours after a meal is considered as a 'hyper' (Diabetes UK).

#### **Hyperglycaemia presentation:**

The following are signs and symptoms of a patient presenting with hyperglycaemia

- Passing more urine than usual (especially at night)
- Thirsty
- Headaches
- Tiredness

#### **Causes of Hyperglycaemia:**

- A missed dose of medication
- Insufficient insulin
- Eaten more carbohydrate than the body and / or medication can cope with
- Stressed
- Unwell from infection
- Over treating a hypoglycaemic event

## Treatment of hyperglycaemia:

If a blood glucose level is 15mmol/L or more take the following action:

- plenty of sugar-free fluids
- encourage the patient to move around / exercise / walk
- if the patient is feeling unwell seek review from doctor, physical health care practitioner.

Retest after 2 hours if the blood glucose remains above 15mmol/L take the following action:

- if the patient is on insulin, administer extra insulin if prescribed
- check urine / serum for the presence of ketones (seek review if present)
- if the patient is feeling unwell (especially vomiting) contact Doctor, Physical Healthcare Practitioner or seek specialist advice from an Acute Trust.
- Assess for red flags (see section 5.2)

If blood glucose remains high (over 15mmols/L) despite above actions and the patient appears well, arrange routine review of diabetes control.



- If a blood glucose level is 15mmol/L or more, urine / serum must be checked for ketones



### Diabetes Management Young People (12-18 years old)

Staff must be aware that young people with type 1 diabetes should monitor blood ketones if hyperglycaemia is suspected or when they are ill or experiencing high blood glucose levels.

## 5.2 Emergency Situations: Red Flags



Diabetic Ketoacidosis (DKA) and Hyperglycaemic Hyperosmolar State (HHS) are medical emergencies. Call (9)999 to arrange immediate transfer to A&E.

### 5.2.1 Diabetic Ketoacidosis (DKA)

Diabetic ketoacidosis (DKA) is a life threatening acute metabolic complication of Type 1 diabetes mellitus, and occasionally Type 2 diabetes. It occurs when insulin therapy is omitted or becomes inadequate for the current physiological state, usually as a result of concurrent illness such as chest or urine infections or sickness and diarrhoea. DKA is often precipitated by recurrent vomiting in an unwell patient.



In 2015, the MHRA reported that SGLT2 inhibitors (e.g. empagliflozin, dapagliflozin) may cause diabetes ketoacidosis even at only mildly raised blood glucose levels (<14mmol/L). Therefore, clinicians should test for ketones in patients presenting with symptoms of DKA even if blood glucose is only mildly elevated.

## DKA Presentation

DKA manifests as a state of severe uncontrolled hyperglycaemia and gross dehydration which will inevitably progress unless it is corrected by rehydration with intravenous fluids and adequate insulin. Its characteristics include:

- Hyperglycaemia (Raised blood sugar) with metabolic acidosis (low serum bicarbonate)
- Polydipsia / Polyuria / Thirst
- Nausea or Vomiting
- Non-specific abdominal pain
- Weakness / Drowsiness / Altered conscious level
- Hypotension / Tachycardia / Hypothermia / Kussmaul Respirations (Breathlessness due to deep fast respirations)
- Dehydration
- Ketones in blood or urine
- Glycosuria (Glucose in Urine)
- Acetone Odour on breath (smells like pear drops)



### Diabetes Management Young People (12-18 years old)

All staff must be aware that young people taking insulin for diabetes may develop DKA with normal blood glucose levels, therefore vigilance is essential in the management of a young person with diabetes. It is essential to:

- Suspect DKA if the blood glucose is normal in a young person with diabetes with any of the following: nausea or vomiting, abdominal pain, hyperventilation, dehydration and reduced levels of consciousness.
- When DKA is suspected in a young person with known diabetes, measure **blood ketones** (beta-hydroxybutyrate) using near-patient method if available.
- **If elevated, immediately transfer to acute hospital with acute paediatric facilities. Treat as urgent hospital admission.**

(NICE 2015)

## 5.2.2 Hyperglycaemic Hyperosmolar State (HHS)

HHS is defined by the presence of marked hyperglycaemia associated with dehydration, raised sodium level in the absence of significant acidosis or ketonuria. It usually occurs as a complication of Type 2 Diabetes in the presence of marked hyperglycaemia without the presence of ketones.

Patients can quickly become dehydrated from prolonged hyperglycaemia and eventually if untreated disturbances in osmolality occur and the patient may become hypotensive and collapse.

## HHS Presentation

HHS is characterised by the gradual development of marked hyperglycaemia without the presence of ketones or significant acidosis. Its characteristics include:

- Osmotic symptoms such as thirst / polydipsia / polyuria
- Marked Dehydration
- Altered mental state that can range from a confused state to obtundation (reduced level of alertness) and coma
- Malaise
- Signs of infection
- Glycosuria
- Blood Glucose usually greater than 30mmols / L

## 6 Access to Specialist Advice

Any patient in whom there are any additional concerns over the management of glycaemic control or other diabetes related complications should be referred to an Acute Hospital specialist diabetic team.

Hospital / Service	Contact details	Instructions
James Cook University Hospital, Middlesbrough	Telephone 01642 850850	Specialist Diabetes Advice can be sought from the Diabetes Care Team at James Cook University Hospital in the following ways: <ul style="list-style-type: none"> <li>• Contact the Diabetes Specialist Nursing Team at JCUH through the Hospital Switchboard on Bleeps 1663 &amp; 4231(0900-1700 hrs)</li> <li>• Contact the Consultant Diabetologist on Call through the Hospital Switchboard</li> <li>• For Red Flag features or impending Diabetes Emergencies seek early specialist advice from the Diabetes Care Team or the Medical Registrar on Call at JCUH.</li> </ul>
Harrogate District Hospital	Telephone 01423 885959	Specialist Diabetes Advice can be sought from one of the two Diabetology Consultants in the following ways: <ul style="list-style-type: none"> <li>• Dr Hammond can be contacted via hospital switchboard Bleep 5047</li> <li>• Dr Ray can be contacted via hospital switchboard Bleep 3278</li> <li>• Contact Consultant Secretaries on 01423 553747 or 555322</li> <li>• Diabetologists can also be contacted by sending a fax to 01423 555866.</li> </ul>

University Hospital of North Tees	Telephone 01642 617617	Ask for the Medical Registrar on call
Scarborough General Hospital	Telephone 01723 368111	Ask for the Medical Registrar on call
Darlington Memorial Hospital	Telephone 01325 380100	Ask for the Medical Registrar on call
University Hospital of North Durham	Telephone 0191 333 2333	Ask for the Medical Registrar on call
York and Selby	Telephone 01904 631313	Ask for Medical Registrar on call or Diabetes Specialist Nurse
TEWV Dietetics Service	Telephone 01642 283720	Ask for Jo Smith, Professional Lead

## 7 Annual Monitoring

It is important that all patients with a diagnosis of diabetes in our care attend for annual screening this includes:

- Height, Weight, BMI
- Blood Pressure
- Bloods: HBa1c, U&E, Lipids
- Urinary ACR
- QRISK
- Retinal screening
- Podiatry for regular foot examinations.

Newly diagnosed diabetic patients must be referred for retinal eye screening and diabetic foot care at the point of diagnosis.

## 8.0 Pregnancy and Diabetes

Patients with known diabetes who are pregnant will be offered extra monitoring appointments and scans to help keep good control of blood glucose and check baby's growth and development. Patients should have contact with their diabetes team every one or two weeks. All healthcare professionals should ensure that patients are supported to attend these appointments and any concerns should be raised immediately with the responsible diabetic team.

If a patient is admitted with diabetes please inform the midwife and the responsible dietetic team.

## 9. How this procedure will be implemented

- This procedure will be published on the Trust's intranet and external website.
- Line managers will disseminate this procedure to all Trust employees using a briefing
- This procedure will be disseminated to all trust employees through the e-bulletin

## 9.1 Training needs analysis

It is recommended that all clinical staff complete Diabetes awareness e-learning when a patient is admitted to the ward with diabetes. It is recommended that all clinical staff complete diabetes awareness training annually.

Registered Nurses are required to demonstrate competence as part of a three yearly face to face medication assessment.

Staff/Professional Group	Type of Training	Duration	Frequency of Training
Registered Nurses and Health care assistants	Diabetes Awareness e-learning	1 hour	Annually and when a patient is admitted to the ward
	Insulin Safety e-learning	1 hour	
Medical Staff	e-learning RCPsych Diabetes and Insulin Safety	1 hour	Annually

## 10. How the implementation of this procedure will be monitored

Auditable Standard/Key Performance Indicators	Frequency/Method/Person Responsible	Where results and any Associate Action Plan will be reported to, implemented and monitored; (this will usually be via the relevant Governance Group).
1 Clinical Audit of adherence to the procedure to include: <ul style="list-style-type: none"> <li>• Essential care</li> <li>• BM monitoring</li> <li>• Insulin prescribing</li> <li>• Insulin storage and administration</li> <li>• Management of hypo / hyperglycaemia</li> </ul>	Annually Clinical Audit	Clinical Effectiveness Group. Physical Health and Wellbeing Group

## 11.0 Definitions

Term	Definition
Beta-hydroxybutyrate	<ul style="list-style-type: none"> <li>Specific ketone body that's released early in the onset of ketosis.</li> </ul>
Diabetic Ketoacidosis (DKA)	<ul style="list-style-type: none"> <li>Diabetic ketoacidosis (DKA) is a life threatening acute metabolic complication of Type 1 diabetes mellitus, and occasionally type 2 diabetes. It occurs when insulin therapy is omitted or becomes inadequate for the current physiological state, usually as a result of concurrent illness such as chest or urine infections or sickness and diarrhoea.</li> </ul>
Hypoglycaemia	<ul style="list-style-type: none"> <li>Hypoglycaemia is a condition which occurs when the blood glucose levels are too low to provide enough energy for the body's activities. A blood glucose level of less than 4mmol/L should be considered as a 'hypo'.</li> </ul>
Hyperglycaemia	<ul style="list-style-type: none"> <li>Hyperglycaemia is a condition which occurs when the blood glucose levels are too high. A blood glucose level of more than 7.0mmol/L before a meal and above 8.5mmol/L two hours after a meal is considered as a 'hyper'.</li> </ul>
Hyperglycaemic Hyperosmolar State (HHS)	<ul style="list-style-type: none"> <li>HHS is defined by the presence of marked hyperglycaemia associated with dehydration, raised sodium level in the absence of significant acidosis or ketonuria. It usually occurs as a complication of Type 2 Diabetes in the presence of marked hyperglycaemia without the presence of ketones.</li> </ul>

## 12.0References

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(Accessed on 6th July 2015)

NHS Improvement (2016) Patient Safety Alert: Risk of severe harm and death due to withdrawing insulin from pen devices. Online available from:

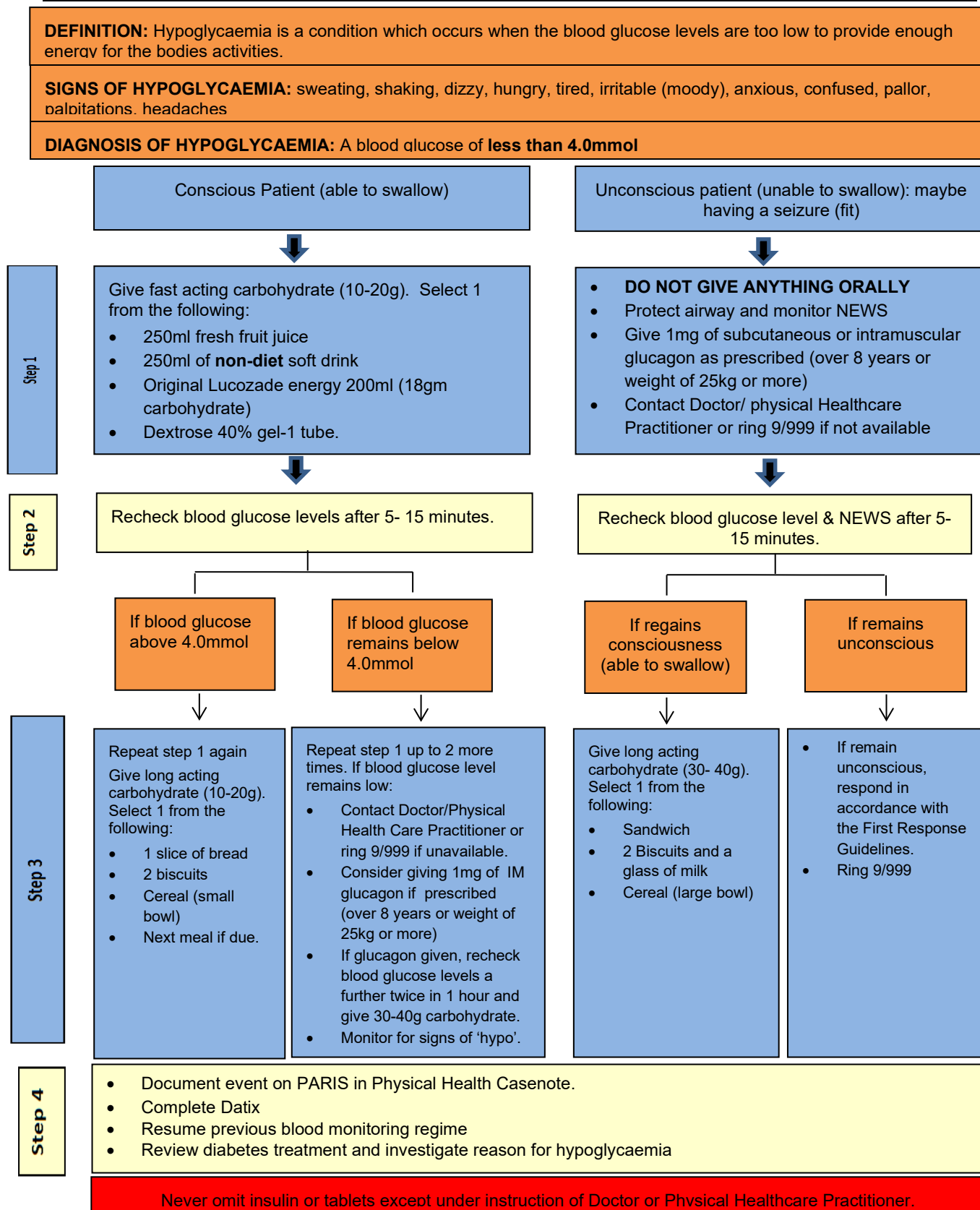
[https://improvement.nhs.uk/documents/510/Patient\\_Safety\\_Alert\\_-\\_Withdrawing\\_insulin\\_from\\_pen\\_devices.pdf?UNLID=9405409282018824162256](https://improvement.nhs.uk/documents/510/Patient_Safety_Alert_-_Withdrawing_insulin_from_pen_devices.pdf?UNLID=9405409282018824162256)

MHRA Drug Safety Update June 2015: SGLT2 inhibitors (canagliflozin, dapagliflozin, empagliflozin): risk of diabetic ketoacidosis

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/438800/Drug\\_Safety\\_Update\\_-\\_June\\_2015\\_pdf.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/438800/Drug_Safety_Update_-_June_2015_pdf.pdf)

## 8 Appendices

### 8.1 Appendix 1: Treatment of Hypoglycaemia (Adult) flowchart

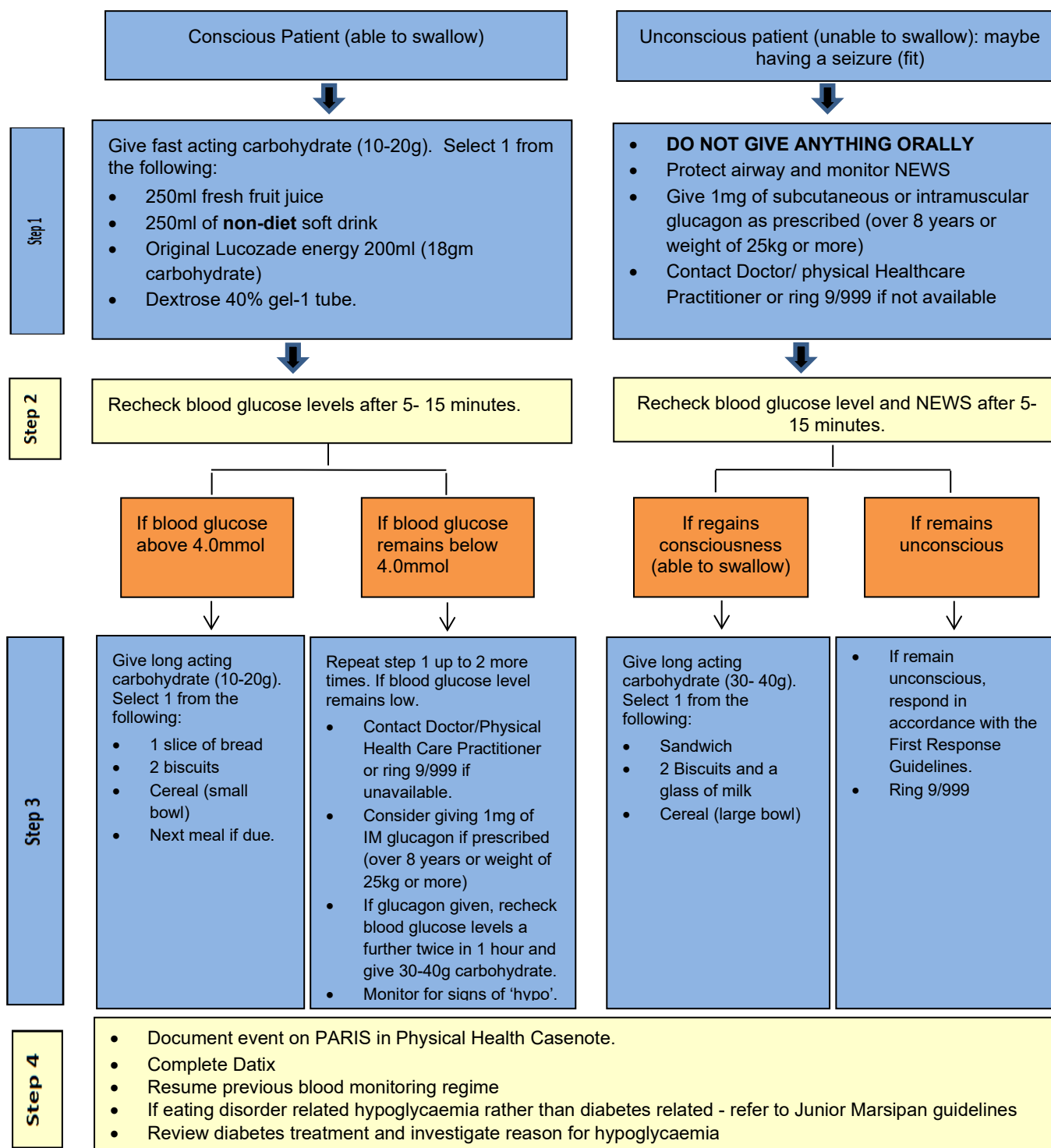


## 11.2 Appendix 2: Treatment of Hypoglycaemia (Young Person) flowchart

**DEFINITION:** Hypoglycaemia is a condition which occurs when the blood glucose levels are too low to provide enough energy for the bodies activities.

**SIGNS OF HYPOGLYCAEMIA:** sweating, shaking, dizzy, hungry, tired, irritable (moody), anxious, confused, pallor, palpitations, headaches

**DIAGNOSIS OF HYPOGLYCAEMIA:** Blood glucose of **less than 4.0mmol**



**Never omit insulin or tablets except under instruction of Doctor or Physical Healthcare Practitioner.**

## Appendix 2 - Equality Analysis Screening Form

**Please note; The Equality Analysis Policy and Equality Analysis Guidance can be found on InTouch on the policies page**

Name of Service area, Directorate/Department i.e. substance misuse, corporate, finance etc.	Physical Health care				
Name of responsible person and job title	Ann Thomas, Nurse Consultant				
Name of working party, to include any other individuals, agencies or groups involved in this analysis	Diabetes Sub-group. Ann Thomas, Nurse Consultant, Dr Adel Muir, Physical Health doctor, Karen Blakemore, Lead Nurse Physical Health, Kizzie Hodgson, Physical Care practitioner, Fiona Inns, Clinical Pharmacist, Angela Norris, Specialist Dietician				
Policy (document/service) name	Diabetes Management for Inpatients				
Is the area being assessed a...	Policy/Strategy		Service/Business plan		Project
	Procedure/Guidance			√	Code of practice
	Other – Please state				
Geographical area covered	Trust wide				
Aims and objectives	The main aim of this document is to set standards in practice to ensure safe effective care of Patients with Diabetes whilst residing as an inpatient within the trust. This guideline will support medical and nursing staff through the process required to ensure Patient safety is maintained in relation to Diabetes management whilst the patient is in hospital.				

Start date of Equality Analysis Screening (This is the date you are asked to write or review the document/service etc.)	August 2018
End date of Equality Analysis Screening (This is when you have completed the equality analysis and it is ready to go to EMT to be approved)	<b>July 2019</b>

**You must contact the EDHR team if you identify a negative impact. Please ring Sarah Jay 0191 3336267**

1. Who does the Policy, Service, Function, Strategy, Code of practice, Guidance, Project or Business plan benefit?					
The procedure aims to ensure patient safety is maintained in relation to diabetes care and management. It will provide information to support staff with their decision making and will ultimately ensure the patient has a safe experience whilst in hospital.					
2. Will the Policy, Service, Function, Strategy, Code of practice, Guidance, Project or Business plan impact negatively on any of the protected characteristic groups below?					
<b>Race</b> (including Gypsy and Traveller)	No	<b>Disability</b> (includes physical, learning, mental health, sensory and medical disabilities)	No	<b>Gender</b> (Men, women and gender neutral etc.)	No
<b>Gender reassignment</b> (Transgender and gender identity)	No	<b>Sexual Orientation</b> (Lesbian, Gay, Bisexual and Heterosexual etc.)	No	<b>Age</b> (includes, young people, older people – people of all ages)	No
<b>Religion or Belief</b> (includes faith groups, atheism and philosophical)	No	<b>Pregnancy and Maternity</b> (includes pregnancy, women who are breastfeeding and women on	No	<b>Marriage and Civil Partnership</b>	No

belief's)		maternity leave)		(includes opposite and same sex couples who are married or civil partners)	
<p><b>Yes</b> – Please describe anticipated negative impact/s</p> <p><b>No</b> – Please describe any positive impacts/s</p> <p>The procedure will improve patient safety and experience whilst in the care of the organisation.</p>					

<p><b>3.</b> Have you considered other sources of information such as; legislation, codes of practice, best practice, nice guidelines, CQC reports or feedback etc.?  <b>If 'No', why not?</b></p>				<b>Yes</b>	√		
<p><b>Sources of Information may include:</b></p> <ul style="list-style-type: none"> <li>• Feedback from equality bodies, Care Quality Commission, Equality and Human Rights Commission, etc.</li> <li>• Investigation findings</li> <li>• Trust Strategic Direction</li> <li>• Data collection/analysis</li> <li>• National Guidance/Reports</li> </ul>		<ul style="list-style-type: none"> <li>• Staff grievances</li> <li>• Media</li> <li>• Community Consultation/Consultation Groups</li> <li>• Internal Consultation</li> <li>• Research</li> <li>• Other (Please state below)</li> </ul>					
<p><b>4.</b> Have you engaged or consulted with service users, carers, staff and other stakeholders including people from the following protected groups?: Race, Disability, Gender, Gender reassignment (Trans), Sexual Orientation (LGB), Religion or Belief, Age, Pregnancy and Maternity or Marriage and Civil Partnership</p>							

**Yes** – Please describe the engagement and involvement that has taken place

Consultation process has occurred with all staff groups within the organisation.  
Information from lessons learnt, incidents and clinical audit have been used to inform the content of the procedure.

**No** – Please describe future plans that you may have to engage and involve people from different groups

5. As part of this equality analysis have any training needs/service needs been identified?

**Yes** Please describe the identified training needs/service needs below

All clinical staff to complete diabetes e-learning.

A training need has been identified for;

Trust staff	Yes	Service users	No	Contractors or other outside agencies	No

**Make sure that you have checked the information and that you are comfortable that additional evidence can provided if you are required to do so**

The completed EA has been signed off by:

You the Policy owner/manager:

Type name: Ann Thomas

Date: 01/07/19

Your reporting (line) manager:

Type name: Simon Lancashire

Date:01/07/2019

If you need further advice or information on equality analysis, the EDHR team host surgeries to support you in this process, to book on and find out more please call: 0191 3336267/3046



## 9 Document control

Date of approval:	21 November 2019	
Next review date:	29 February 2024	
This document replaces:	Diabetes Management (Adults and Young People) CLIN-0081-v2.2	
Lead:	Name	Title
	Ann Thomas	Nurse Consultant
Members of working party:	Name	Title
	Dr Adel Muir	Speciality Doctor
	Fiona Inns	Clinical Pharmacist
	Angela Norris	Specialist Dietitian
	Kizzie Hodgson	Physical Health Nurse Practitioner
	Karen Blakemore	Lead Nurse Physical Health
This document has been agreed and accepted by: (Director)	Name	Title
	Elizabeth Moody	Director of Nursing and Governance
This document was approved by:	Name of committee/group	Date
	Physical Health and Wellbeing Group	23 September 2019
	Drug and Therapeutics Committee	21 November 2019
An equality analysis was completed on this document on:	01 July 2019	

### Change record

Version	Date	Amendment details	Status
V2.3	01 July 2019	Full review of procedure resulting in new version of the diabetes procedure for inpatients. The main changes: include the process of managing diabetic patients on admission to hospital, accessing specialist advice, location of emergency insulin and intervention plan considerations. In addition the hypoglycaemia management guidelines have been revised and can be found in the appendix	Approved
V2.3	30 Mar 2021	Review date extended to 21 May 2023	Approved
V2.3	May 2023	Review date extended to 30 Aug 2023	Approved
V2.3	Sep 2023	Review date extended to 29 Feb 2024	Approved