



**Please Note: This policy is currently under review.**

# Diabetes Care at the End of Life

This procedural document supersedes: PAT/T 57 v.3 – Diabetes Care at the End of Life



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## Amendment Form

Please record brief details of the changes made alongside the next version number. If the procedural document has been reviewed **without change**, this information will still need to be recorded although the version number will remain the same.

Version	Date Issued	Brief Summary of Changes	Author
Version 4	10 September 2021	<ul style="list-style-type: none"> <li>Minor changes of names and dates only</li> </ul>	Karen Lanaghan Shivani Dewan Sue Robson
Version 3	21 March 2019	<ul style="list-style-type: none"> <li>Amendment to algorithm for End of Life Diabetes Management</li> </ul>	Annette Johnson Karen Lanaghan Shivani Dewan
Version 2 (amended)	15 March 2016	Addition to section 4.2 at the request of the Ethics Advisory Committee – see <b>Type 1 diabetes</b> : .....DO NOT DISCONTINUE THE INSULIN, unless the patient requests it to be stopped.	Annette Johnson
Version 2	5 January 2016	<ul style="list-style-type: none"> <li>This document has been revised with significant changes - please read in full</li> </ul>	Annette Johnson Karen Lanaghan Shivani Dewan
Version 1	June 2012	<ul style="list-style-type: none"> <li>This is a new procedural document - please read in full</li> </ul>	Laura McTague John Hosker Tracy Evans-Phillips

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## 1. INTRODUCTION

- 1.1 Approximately half a million people die in the United Kingdom each year, of whom more than three quarters are aged 75 years and over. Calculations based on the prevalence of diabetes indicate that 6-9% of those dying will have diabetes, the majority with Type 2 diabetes (Association of British Clinical Diabetologists (ABCD) - Statement 2010. The National Diabetes Inpatient audit found that patients with diabetes accounted for 18% of all hospital audited beds (NaDIA 2017).
- 1.2 Previous studies into the care of people with diabetes at the end of life have highlighted a wide variation in clinical practice. There has been no clear consensus or guidance about the frequency of blood sugar testing and the use of sliding scale insulin/complex insulin regimes at the end of life.

## 2. PURPOSE

The purpose of this document is to empower staff within DBTH who liaise, interact, or have management responsibilities for those patients (and their families/carers) with diabetes at the end of their life.

The key points are:

- Describe a consistent high quality approach towards end of life diabetes care.
- Inform the workforce about the key issues in end of life diabetes care, providing a platform for sensitive, appropriate and supportive care.
- To foster partnerships in end of life diabetes care within Trust established Palliative Care Planning, the DBTH Individualised Plan of Care in Last Hours/Days of Life (IPOC 029) and End of Life: Guidelines for the Management of Patients in last hours/days of life (PAT/T 65).

## 3. DUTIES AND RESPONSIBILITIES

### **Lead Nurse Diabetes and Endocrinology**

- Implementation of this policy and all National recommendations made regarding diabetes at the end of life care.
- Ensure education and training of all appropriate Trust staff.
- Responsibilities to ensure all patients with diabetes receive an equitable and high quality service.
- To be alerted to all patients with diabetes who are identified as being in the last few days/hours of life.
- Escalate any incidents regarding diabetes end of life care to the relevant clinical governance groups.

### **Lead Diabetologist and Specialist Palliative Care Consultant**

- Act as a clinical expert in diabetes end of life care.
- Provide education and training to medical staff.

**Head of Nursing and Quality for Division of Medicine**

- Support the Lead Nurse in provision of care for patients with diabetes at the end of life.
- The Doncaster Diabetes Network meet every two months and may include End of Life Care on the agenda.

**Matrons and Ward Managers**

- To promote safe standards of diabetes end of life care on all wards as appropriate.
- Ward Managers to release staff when required in order to participate in education and training.

**All staff directly involved in caring for patients who are dying and have diabetes**

- All staff to demonstrate empathy and good communication when dealing with patients deemed to be in the last few days/hours of life and also their relatives. Remembering that many of these patients will have self-managed their diabetes care for many years and may want to continue to make decisions.
- To ensure all diabetic patients on the individualised plan of care for the last few days/hours of life, are referred to the Diabetes Specialist Nurse Team so that they can offer the patient and staff full support and guidance.

**4. PROCEDURE**

- End of life/Specialist Palliative Care Team referral to Diabetes Specialist Nursing Team to inform of patient. Monday-Friday 0800-1700. Sat and Sun and bank Holidays 0800-1500.
- Talk to the individual and their family to discuss the diabetes management during the last hours/days of life.
- Explain to the patient/family the principles of diabetes care at the end of life.
- Document within the Individualised Plan of Care in Last Hours/Days of Life (IPOC 029) Multi-disciplinary Team progress notes an individualised medical plan for the patient.
- Agree this plan of care with the patient/relative and multi-disciplinary team caring for the individual/End of Life Care Team.

**4.1 Key Principles of Care**

- Provision of a symptom free-death.
- Tailor glucose- lowering therapy and minimise diabetes - related adverse treatment.
- Avoid metabolic de-compensation and diabetes related emergencies:
  - Frequent and unnecessary hypoglycaemia. See In Hospital Management of Hypoglycaemia in Adults with Diabetes Mellitus – [PAT/T 49](#).
  - Diabetic keto-acidosis; if this occurs follow IPOC 1421 WPR39420 - see Appendix 1
  - Hyperosmolar hyperglycaemic state;
  - Persistent symptomatic hyperglycaemia.
- Avoidance of symptomatic clinical dehydration.
- Support and maintain the empowerment of the individual patient (in their diabetes management) and their carer to the last possible stage.

## 4.2 Management goals in key clinical areas

- **Glucose control targets** - Discuss with the patient and responsible Multi-disciplinary team (MDT), the recommendation that blood glucose should not be maintained lower than 6mmol/l or higher than 15mmol/l to avoid symptoms.
- **Prevention/ management of hypoglycaemia**  
Adjustment of hypoglycaemic agents as below.  
Follow the Trust protocol for In Hospital Management of Hypoglycaemia in Adults with Diabetes Mellitus - PAT/T 49.
- **Type 1 diabetes:** Insulin withdrawal is likely to lead to death. Insulin therapy should be simplified. **DO NOT DISCONTINUE THE INSULIN, unless the patient requests it to be stopped.** - See Appendix 2.
- **Type 2 diabetes on Insulin therapy:** Insulin therapy should be simplified. See Appendix 2.
- **Type 2 diabetes treated with diet/diet and tablets/non- insulin injectable**  
Stop hypoglycaemic agents. Stop blood glucose monitoring. If patient symptomatic of hyperglycaemia e.g. polyuria or polydipsia check blood glucose with point of care testing equipment.
  - a) If blood glucose less than 15mmol/l only retest if symptoms are troublesome.
  - b) If blood glucose greater than 15mmol/l consider long acting analogue insulin.
  - c) See Appendix 2 for guidance.

## 4.3 Patients Lacking Capacity

Sometimes it will be necessary to provide care and treatment to patients who lack the capacity to make decisions related to the content of this policy. In these instances staff must treat the patient in accordance with the Mental Capacity Act 2005 (MCA 2005).

- A person lacking capacity should not be treated in a manner which can be seen as discriminatory.
- Any act done for, or any decision made on behalf of a patient who lacks capacity must be done, or made, in the person's Best Interest.
- Further information can be found in the MCA policy, and the Code of Practice, both available on the intranet.

**There is no single definition of Best Interest.** Best Interest is *determined on an individual basis. All factors relevant to the decision must be taken into account, family and friends should be consulted, and the decision should be in the Best Interest of the individual. Please see S5 of the MCA code of practice for further information.*

## 5. TRAINING/SUPPORT

The Trust learning needs analysis (diabetes) will identify individual needs for staff. Diabetes and Endocrinology can be contacted at any time for support.

## 6. MONITORING COMPLIANCE WITH THE PROCEDURAL DOCUMENTS

What is being Monitored	Who will carry out the Monitoring	How often	How Reviewed/ Where Reported to
End of Life Care in patients with the co-morbidity of Diabetes who have been referred to the Diabetes Specialist Nurse Team	In-patient Diabetes Specialist Nurse Team (IDSN)	Annually	A review of blood glucose control will take place within two weeks of death and an annual audit will be presented by the Lead Nurse Diabetes & Endocrinology at PSRG/End of Life Care Team Meeting.

## 7. DEFINITIONS

**IDSN** - In-patient diabetes specialist nurse

**ABCD** – Association of British Clinical Diabetologists

## 8. EQUALITY IMPACT ASSESSMENT

The Trust aims to design and implement services, policies and measures that meet the diverse needs of our service, population and workforce, ensuring that none are disadvantaged over others. Our objectives and responsibilities relating to equality and diversity are outlined within our equality schemes. When considering the needs and assessing the impact of a procedural document any discriminatory factors must be identified

An Equality Impact Assessment (EIA) has been conducted on this procedural document in line with the principles of the Equality Analysis Policy (CORP/EMP 27) and the Fair Treatment for All Policy (CORP/EMP 4).

The purpose of the EIA is to minimise and if possible remove any disproportionate impact on employees on the grounds of race, sex, disability, age, sexual orientation or religious belief. No detriment was identified (see Appendix 3).

## 9. ASSOCIATED TRUST PROCEDURAL DOCUMENTS

- Mental Capacity Act 2005 - Policy and Guidance, including Deprivation of Liberty Safeguards (DoLS) - PAT/PA 19
- Privacy and Dignity Policy - PAT/PA 28
- In Hospital Management of Hypoglycaemia in Adults with Diabetes Mellitus – PAT/T 49
- End of Life: Guidelines for the Management of Patients in last hours/days of life – PAT/T 65
- Individualised plan of care in last hours/days of life – IPOC 029 WPR23887
- Adult Diabetic keto-acidosis(DKA) treatment and monitoring chart – IPOC 1421
- Equality Analysis Policy (CORP/EMP 27)
- Fair Treatment for All Policy (CORP/EMP 4)

## 10. DATA PROTECTION

Any personal data processing associated with this policy will be carried out under 'Current data protection legislation' as in the Data Protection Act 2018 and the UK General Data Protection Regulation (GDPR) 2021.

For further information on data processing carried out by the trust, please refer to our Privacy Notices and other information which you can find on the trust website: <https://www.dbth.nhs.uk/about-us/our-publications/information-governance/>

## 11. REFERENCES

ABCD 2010, Position statement on diabetes and end of life care (Association of British Clinical Diabetologists)

DIABETES UK (2018) End of Life Diabetes Care: Clinical Care Recommendations 2018 3<sup>rd</sup> edition on [www.diabetes.org.uk](http://www.diabetes.org.uk)

NHS Digital (2018) National Diabetes In-patient audit 2017 on <https://files.digital.nhs.uk/pdf/s/7/nadia-17-rep.pdf>

Department of Constitutional Affairs  
Mental Capacity Act (2005): Code of Practice, 2007  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/497253/Mental-capacity-act-code-of-practice.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/497253/Mental-capacity-act-code-of-practice.pdf)



APPENDIX 1 – IPOC 1421 WPR39420

**Doncaster and  Bassetlaw Hospitals**  
 NHS Foundation Trust  
**ADULT DIABETIC KETOACIDOSIS (DKA)  
 TREATMENT AND MONITORING CHART**

AFFIX LABEL HERE IF AVAILABLE

NHS Number: \_\_\_\_\_  
 District Number: \_\_\_\_\_  
 Surname: \_\_\_\_\_  
 Forename(s): \_\_\_\_\_  
 Address: \_\_\_\_\_  
 D.o.B.: \_\_\_\_\_

- This treatment chart will replace the fluid charts used within first 24 hours of DKA management.
- Not to be used for Paediatric DKA patients.
- Use monitoring chart on page 4 and refer to abridged version of DKA guidance on page 2 and 3.

Date: \_\_\_\_\_ Consultant: \_\_\_\_\_  
 Ward: \_\_\_\_\_ Site: BDGH / DRI  
 Age: \_\_\_\_\_ yrs (Caution if 18-25 or >70 YEARS)  
 Patient Weight: \_\_\_\_\_ Kg

**Intravenous Fluids: Check if patient received IV fluids by paramedics and review the following chart/rate accordingly. Rate and volume may need to be reduced in patients under 25 or over 70 years of age, pregnancy, heart failure or eGFR <30.**

Fluid prescription should only be signed for one litre at a time

Type of Fluid	Volume	Potassium Chloride See Page 4 for Potassium prescription guidance. (Delete as appropriate)	Standard rate/Amend as per fluid status. (Delete as appropriate)	Prescriber Name and signature	Infusion started		
					Time	By	Check
0.9% Sodium Chloride via infusion pump	1 Litre	None (Action 2 - Box A on page 2)	1 hr / other _____ If SBP <90, give 500ml from this bag over 15 min.				
	500 ml	20 mmol / None	1 hr / other _____				
	500 ml	20 mmol / None	1 hr / other _____				
	500 ml	20 mmol / None	1 hr / other _____				
	500 ml	20 mmol / None	1 hr / other _____				
	500 ml	20 mmol / None	2 hrs / other _____				
	500 ml	20 mmol / None	2 hrs / other _____				
	500 ml	20 mmol / None	2 hrs / other _____				
	500 ml	20 mmol / None	3 hrs / other _____				
	500 ml	20 mmol / None	3 hrs / other _____				

**When blood glucose < 14 mmol/L, commence 10% glucose at 125 ml/hr to run alongside 0.9% sodium chloride. Review and consider reducing the rate of sodium chloride infusion to avoid fluid overload and cerebral oedema.**

	Rate	Confirm if rate of concomitant Sodium chloride need adjusting	Prescriber Name and signature	Infusion started		
				Time	By	Check
10% Glucose 500ml	4 hrs / other _____	Yes / No				
	4 hrs / other _____	Yes / No				
	4 hrs / other _____	Yes / No				
	4 hrs / other _____	Yes / No				

- Insulin:**
- 1) Give stat dose of Human Actrapid 10 units SC or IM. Prescribe stat dose on JAC or A&E clerking sheet.
  - 2) Commence IV insulin via a pump at a continuous fixed rate of 0.1 units/kg/hour. Estimate patient weight if unable to weigh.
  - 3) If patient already taking basal insulin such as (Lantus, Levemir, Tresiba, Insulatard, Humulin I), prescribe it on JAC for it to be administered at usual dose and time.

INSULIN (Weight based fixed dose continuous IV infusion- starting dose of 0.1 unit / kg/ hour)	Initial rate- ml/hour (Not likely to be more than 15 ml/hour)	Prescriber name and bleep	Infusion started		
			Time	By	Check
Human Actrapid insulin 50 units in 50ml Sodium Chloride 0.9% iv					

WPR39420  
 Aug 2013  
 WHITE

**Abridged ADULT DIABETIC KETOACIDOSIS (DKA) MANAGEMENT pathway****CONFIRM DIAGNOSIS OF DKA – all of following present:**

- Capillary ketone >3mmol/L or Urine Ketone > 2+
- Blood glucose >11mmol/L or known diabetes mellitus ( be aware of Euglycaemic DKA)
- Bicarbonate <15mmol/L or venous/arterial pH <7.3

**IMMEDIATE ACTIONS:**

- Rapid ABCDE with measurement of RR, temp, pulse, BP, EWS, GCS and pulse oximetry
- Check Capillary glucose (BM) and ketones using blood and ketone meters.
- Obtain urgent IV access and commence IV fluids (Box A action 2) – request critical care support if difficulties.
- Stat dose of 10 units of Human Actrapid given either sc or im.
- Send venous sample for U&E's, lab glucose, FBC and measure bicarbonate and pH by venous blood gas.

**The presence of one or more of the following may indicate severe DKA –****Obtain immediate senior review and refer to Critical Care for consideration of admission:**

- GCS less than 12 (or abnormality on AVPU scale)
- Hypokalaemia on admission (below 3.5mmol/L)
- Systolic BP persistently below 90 mmHg despite fluid resuscitation
- Oxygen saturation below 92% on air (assuming normal baseline respiratory function)
- Venous or arterial pH persistently below 7.1
- Venous bicarbonate level below 5mmol/L
- Capillary ketones above 6mmol/L

**BOX A: Immediate management upon diagnosis: (0 to 60 minutes) t=0 at time intravenous fluids are commenced. Actions listed in this box are more likely to be relevant whilst patient in ED.**

Action 1	<b>Urgent initial assessment and confirm diagnosis as above</b>
Action 2	<b>Commence 0.9% sodium chloride infusion via infusion pump</b> <ul style="list-style-type: none"> <li>• <b>Systolic BP on admission above 90 mmHg</b> Prescribe fluids and follow fluid replacement schedule on page 1</li> <li>• <b>Systolic BP on admission below 90 mmHg</b> Hypotension is likely to be due to low circulating volume, but consider other causes such as heart failure, sepsis, etc. Give 500mL of 0.9% sodium chloride solution over 15 minutes. If SBP remains below 90mmHg this may be repeated whilst awaiting senior input. In practice most patients require between 500 to 1000mL given rapidly. Once SBP above 90mmHg follow fluid replacement schedule on page 1.</li> </ul>
Action 3	<b>Administer stat dose of 10 units soluble insulin s/c or i/m – Prescribe on A&amp;E clerking sheet or on JAC</b>
Action 4	<b>Commence fixed rate intravenous insulin infusion (IVII)</b> 0.1unit/kg/hr based on actual or estimate weight – prescribe on page 1 Use 50units human Actrapid in 50ml sodium chloride 0.9% If patient usually takes basal insulin such as Lantus, Levemir, Tresiba, Humulin I or Insulatard, then prescribe it on JAC for it to be given at usual dose and time Insulin may be given through same line as IV fluids using a Y connector
Action 5	<b>Complete full history and clinical examination</b> Refer to Critical Care for admission if above guidelines indicate severe DKA.
Action 6	<b>Consider further investigations, ascertain precipitating causes and treat accordingly</b> CXR, ECG, MI screen, MSU, blood cultures
Action 7	<b>Establish monitoring regimen and ensure this is clearly handed over to medical team.</b> Use 24 hour DKA monitoring form on page 4 Investigations needed at 60 min : BM, Capillary Ketone, Venous U&Es and VBG for pH and bicarbonate Continuous pulse oximetry and cardiac monitoring if required
Action 8	<b>Prescribe thrombo-prophylaxis on JAC</b>
Action 9	<b>Ward location</b> Initial Management should be in ED Resus until bed on ATC/ MAU/Critical care is available. Transfer to Diabetes ward from ATC/MAU should only be considered on resolution of DKA as per the criteria. Patients developing DKA whilst inpatient on non-medical hospital wards should be referred to on call Medical Registrar and transferred to ATC/MAU.(Unless Critical Care Outreach involvement is indicated as per above criteria).
Action 10	<b>Intravenous bicarbonate is very rarely necessary. Discuss with on call Medical Consultant/ Critical care team if pH does not improve and remains &lt;7.1</b>

BOX B: Management from 60 minutes to 6 hours- Patient is likely to be transferred to ATC/MAU/HDU during this period	
Aims	<ul style="list-style-type: none"> <li>• Venous bicarbonate rise of at least 3mmol/L/hr OR rate of fall of ketones of at least 0.5mmol/L/hr and blood glucose fall of at least 3mmol/L/hr</li> <li>• Maintain serum potassium in normal range</li> <li>• Avoid hypoglycaemia</li> </ul>
Action 1	<p><b>Re-assess patient and continue to monitor vital signs – Ensure that patient has had a senior review (Spr/Consultant)</b></p> <ul style="list-style-type: none"> <li>• Consider urinary catheterisation if incontinent or anuric (ie not passed urine by 60 minutes)</li> <li>• Consider nasogastric tube if patient obtunded or if persistently vomiting</li> <li>• If oxygen saturation falling measure ABGs and request (or repeat) CXR</li> <li>• Document accurate fluid balance including urine output (minimum desired output = 0.5ml/kg/hr)</li> </ul>
Action 2	<p><b>Review metabolic parameters</b></p> <ul style="list-style-type: none"> <li>• Capillary Measurements- glucose and ketone level <b>every hour</b></li> <li>• Venous measurements- pH, bicarbonate via venous blood gas and serum potassium at <b>60 minutes, 2 hours, 4 hours and 6 hours.</b></li> <li>• Complete DKA monitoring chart on Page 4 for all monitoring parameters</li> </ul>
Action 3	<p><b>Assess response to treatment with Insulin infusion, rate may need review if:</b></p> <ul style="list-style-type: none"> <li>• Venous bicarbonate not rising by at least 3mmol/L/hr or blood ketone level not falling by 0.5mmol/L/hr</li> <li>• Plasma glucose not falling by at least 3mmol/L/hr</li> <li>• If ketone level, bicarbonate or glucose not correcting as expected check IV lines, volumes of fluid remaining, look for insulin infusion pump malfunction. Blood ketones should fall by at least 0.5mmol/L/hr.</li> <li>• If plasma glucose not falling by 3 mmol/L, ensure insulin infusion pump is working correctly.</li> <li>• If pump working and connected but metabolic response inadequate, increase insulin infusion rate by 1unit/hr increments until targets achieved</li> <li>• Resolution of DKA is defined by capillary ketones &lt;0.6mmol/L and venous pH &gt;7.3 and/or venous bicarbonate &gt; or =15mmol/L. Continue fixed rate capillary insulin infusion until DKA is resolved.</li> <li>• Do not rely on urine ketone clearance to indicate resolution of DKA because they are slowly cleared and may be present when DKA resolved</li> </ul>
Action 4	<p><b>Potassium replacement</b></p> <ul style="list-style-type: none"> <li>• Hypokalaemia and hyperkalaemia are life-threatening conditions and are common in DKA. Potassium is often high on admission but falls precipitously upon treatment with insulin. Add potassium as per schedule on page 1 as per the Serum potassium results.</li> <li>• If potassium outside reference range, re-assess potassium replacement (as page 1) and check hourly. If remains abnormal after further hour seek senior medical advice.</li> </ul>
Action 5	<p><b>Continue fluid and potassium replacement via infusion pump</b></p> <ul style="list-style-type: none"> <li>• Follow fluid replacement schedule on Page 1 – when blood glucose is less than 14mmol/L <b>commence</b> 10% at glucose at 125 ml/hr to run alongside 0.9% sodium chloride – review fluid prescription to avoid fluid overload</li> </ul>
Action 6	<p><b>JAC- Ensure thromboprophylaxis if indicated and basal insulin is prescribed on JAC if not already done as per Action 4 and 8 in Box A</b></p>

BOX C: 6 to 12 HOURS		BOX D: 12 to 24 HOURS If DKA not resolved by 24 hours, seek senior review	
Aims	<ul style="list-style-type: none"> <li>• Ensure clinical and biochemical parameters are continuing to improve or are normal</li> <li>• Continue IV fluid replacement and IV insulin infusion until acidosis corrected and patient is eating and drinking</li> <li>• Avoid hypoglycaemia and re-assess for complications of treatment such as fluid overload and cerebral oedema</li> <li>• Treat precipitating factors as necessary</li> </ul>		
Action 1	<p><b>Re-assess patient, monitor vital signs</b></p> <ul style="list-style-type: none"> <li>• If patient not improving seek senior advice</li> <li>• Ensure referral made to Diabetes Team</li> </ul>	<p><b>Re-assess patient, monitor vital signs</b></p> <ul style="list-style-type: none"> <li>• If patient not improving seek senior advice</li> <li>• Ensure referral made to Diabetes Team – if not already done</li> </ul>	
Action 2	<p><b>Review biochemical and metabolic parameters</b></p> <ul style="list-style-type: none"> <li>• At 6 hours check venous pH, potassium, bicarbonate and glucose</li> <li>• If DKA not resolved refer to Action 3 in Box B</li> </ul>	<p><b>Review biochemical and metabolic parameters</b></p> <ul style="list-style-type: none"> <li>• At 12, 18 and 24 hours check venous pH, bicarbonate, serum potassium and serum glucose</li> <li>• If remains acidotic (pH&lt;7.3 and/or HCO<sub>3</sub>&lt;15) despite of clearance of blood ketones, check for alternative cause of persisting acidosis</li> </ul>	
Action 3	<p><b>Once DKA is resolved-</b> Use of this IPOC should be discontinued and it should be filed in medical notes. If patient eating- switch back to their subcutaneous insulin regime If not eating or drinking- continue IV fluids and commence on variable dose insulin infusion. Prescribe on 'DBH sliding scale insulin prescription' chart. Maintain capillary glucose 5-10 mmol/L. Rate of fluids should be assessed as per clinical needs.</p> <p><u>Conversion to subcutaneous insulin</u> in a newly diagnosed patient with Type I diabetes is best managed by the Specialist Diabetes Team. In patients previously known to have Type I diabetes their previous regimen is usually restarted; if on basal bolus regimen give usual pre-meal fast acting insulin and take intravenous insulin down 30 minutes later (ensuring that they have been receiving long acting insulin). If on twice-daily pre-mixed insulin, re-introduce before breakfast or evening dose and discontinue intravenous insulin 30 minutes later.</p>		

Date: \_\_\_\_\_

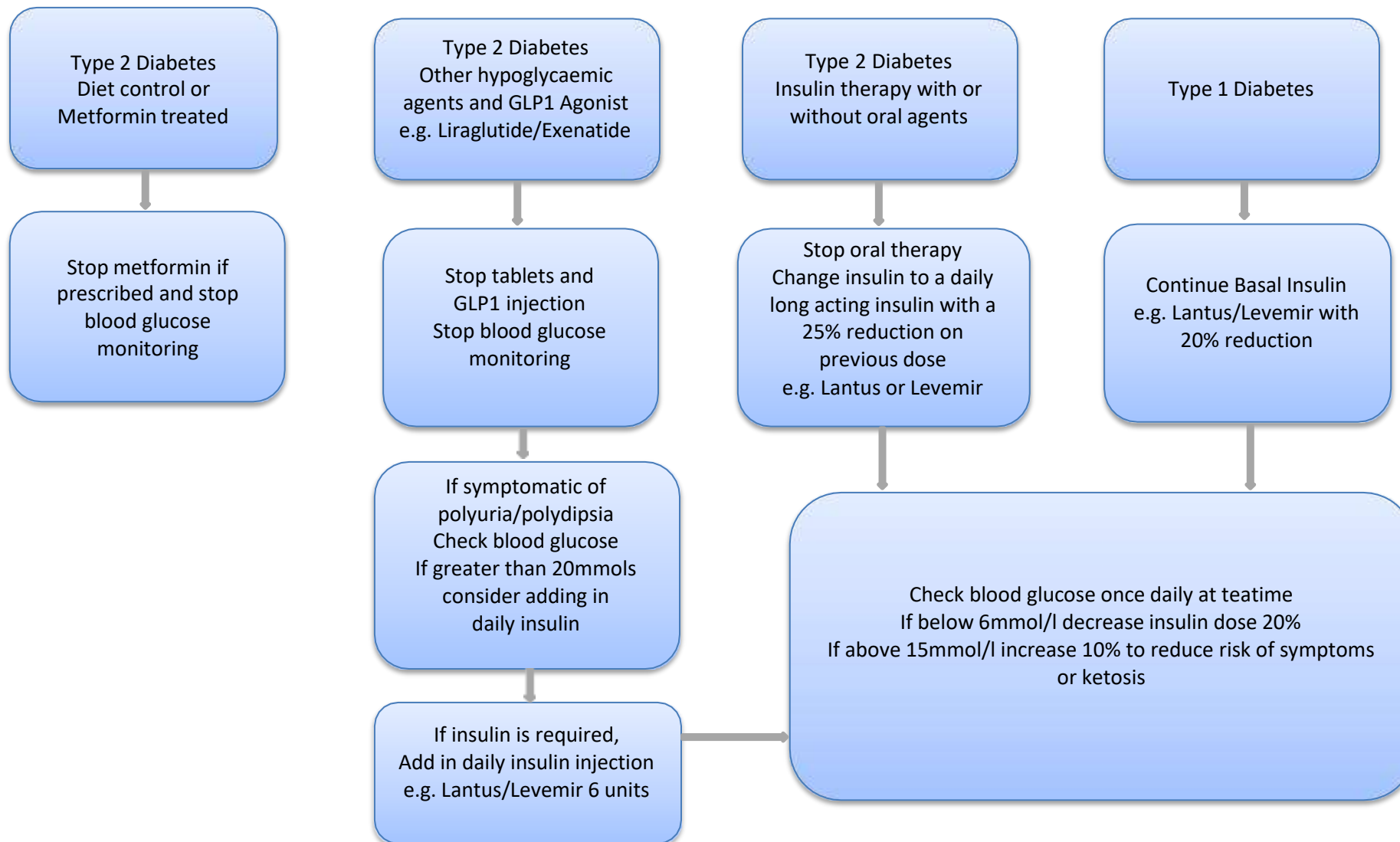
Hours from start	Clock Time	Meter Readings		Volume infused per hour in mls			Cumulative total IV volume infused (ml)	Urine Output per hour (ml)	Nurse Initials	Venous blood gas/ lab results		
		Glucose mmol/l	Ketone mmol/l	Insulin	0.9% Sodium chloride	10% Glucose				pH	Bicarbonate mmol/l	Potassium mmol/l
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1 <sup>st</sup>												
2 <sup>nd</sup>												
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Potassium level in first 24 hours	Potassium replacement guide
Over 5.5 mmol/l	Nil- Reassess Serum K in 1 hour
3.5 to 5.5 mmol/l	20 mmol in every 500ml fluid infused until next scheduled potassium measurement.
Below 3.5 mmol/l	Urgent senior review. May need additional Potassium replacement with cardiac and hourly Serum K monitoring

## APPENDIX 2 - ALGORITHM FOR END OF LIFE DIABETES CARE MANAGEMENT

(To be followed when the patient is on the Individualised Plan of care in Last Hours /Days of Life)

All discussions and management plan to be documented in the IPOC Refer to the In-patient Diabetes Specialist Nurse Team



**APPENDIX 3 – EQUALITY IMPACT ASSESSMENT PART 1 INITIAL SCREENING**

Service/Function/Policy/ Project/Strategy	Division/Executive Department	Assessor (s)	New or Existing Service or Policy?	Date of Assessment																											
Diabetes Care at the End of Life – PAT/T 57 v.4	Division of Medicine	Annette Johnson, Lead Nurse	Existing policy revised	17/02/2021																											
<b>1) Who is responsible for this policy?</b> Name of Division/Directorate <b>Division of Medicine</b>																															
<b>2) Describe the purpose of the service / function / policy / project/ strategy?</b> To ensure all patients with Diabetes who reach the end of their life receive care ensuring the control of their diabetes does not become a cause of death.																															
<b>3) Are there any associated objectives?</b> Legislation, targets national expectation, standards <b>No</b>																															
<b>4) What factors contribute or detract from achieving intended outcomes?</b> – Nil																															
<b>5) Does the policy have an impact in terms of age, race, disability, gender, gender reassignment, sexual orientation, marriage/civil partnership, maternity/pregnancy and religion/belief?</b> Details: [see Equality Impact Assessment Guidance] - <b>No</b>																															
<ul style="list-style-type: none"> <li>• If yes, please describe current or planned activities to address the impact [e.g. Monitoring, consultation] –</li> </ul>																															
<b>6) Is there any scope for new measures which would promote equality?</b> [any actions to be taken] <b>No</b>																															
<b>7) Are any of the following groups adversely affected by the policy?</b> <b>NO</b>																															
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Protected Characteristics</th> <th style="width: 15%;">Affected?</th> <th style="width: 55%;">Impact</th> </tr> </thead> <tbody> <tr> <td>a) Age</td> <td style="text-align: center;">No</td> <td></td> </tr> <tr> <td>b) Disability</td> <td style="text-align: center;">No</td> <td></td> </tr> <tr> <td>c) Gender</td> <td style="text-align: center;">No</td> <td></td> </tr> <tr> <td>d) Gender Reassignment</td> <td style="text-align: center;">No</td> <td></td> </tr> <tr> <td>e) Marriage/Civil Partnership</td> <td style="text-align: center;">No</td> <td></td> </tr> <tr> <td>f) Maternity/Pregnancy</td> <td style="text-align: center;">No</td> <td></td> </tr> <tr> <td>g) Race</td> <td style="text-align: center;">No</td> <td></td> </tr> <tr> <td>h) Religion/Belief</td> <td style="text-align: center;">No</td> <td></td> </tr> </tbody> </table>					Protected Characteristics	Affected?	Impact	a) Age	No		b) Disability	No		c) Gender	No		d) Gender Reassignment	No		e) Marriage/Civil Partnership	No		f) Maternity/Pregnancy	No		g) Race	No		h) Religion/Belief	No	
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<b>8) Provide the Equality Rating of the service / function /policy / project / strategy – tick outcome box</b>																															
<b>Outcome 1</b> ✓	<b>Outcome 2</b>	<b>Outcome 3</b>	<b>Outcome 4</b>																												
<i>*If you have rated the policy as having an outcome of 2, 3 or 4, it is necessary to carry out a detailed assessment and complete a Detailed Equality Analysis form in Appendix 4</i>																															
<b>Date for next review:</b> 24/01/2024																															
<b>Checked by:</b> Shivani Dewan		<b>Date</b> 17/2/2021																													