Guideline for the Management of Hyperglycaemia and Steroid Therapy for Adults

V1.0

February 2025

Summary

The aim of this document is to guide the management of hyperglycaemia because of steroid therapy in adults where a previous diagnosis of diabetes is both not known or known.

Hyperglycaemia in people without a known diagnosis of diabetes is referred to as steroid induced diabetes and may or may not resolve when steroid treatment is discontinued.

The use of steroid treatment in people with a known diagnosis of diabetes can result in worsening glucose control, this is referred to as steroid induced hyperglycaemia. This often requires temporary additional treatment.

Short courses of steroids resulting in minimal periods of hyperglycaemia may not warrant intervention. High doses of steroids over a longer period may cause significant hyperglycaemia resulting in acute complications related to hyperglycaemia.

Data Protection Act 2018 (UK General Data Protection Regulation – GDPR) Legislation.

The Trust has a duty under the Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 to ensure that there is a valid legal basis to process personal and sensitive data. The legal basis for processing must be identified and documented before the processing begins. In many cases we may need consent; this must be explicit, informed, and documented. We cannot rely on opt out, it must be opt in.

Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 is applicable to all staff; this includes those working as contractors and providers of services.

For more information about your obligations under the Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 please see the Information Use Framework Policy or contact the Information Governance Team.

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1. Aim/Purpose of this Guideline

This guideline is for all healthcare professionals looking after adults who are treated with steroids This version supersedes any previous versions of this document.

2. The Guidance

2.1 This guideline sets out an approach to managing hyperglycaemia for adults who require steroid treatment either as an inpatient or those receiving steroids in outpatient settings.

2.1.1. If staff are unsure regarding the management of such patients despite referring to this guidance, they should seek advice from a senior colleague or contact the appropriate clinician as detailed in the guidance, i.e., GP for outpatient settings and Inpatient Diabetes Specialist Nurse / or Endocrine Team for inpatients.

2.1.2. This guidance does not cover the management of hyperglycaemia associated with dexamethasone treatment for people with covid-19 infection.

2.1.3. For clinicians who require a patient use Capillary Blood Glucose meter to provide to individual patients to self-monitor: within a hospital setting please contact the Diabetes Specialist Nurse Team or Royal Cornwall Hospital (RCH) out of hours Grenville Ward.

2.1.4. RCH: For patient education for inpatients refer on Maxims to the Diabetes Specialist Nurse Inpatient Team. For Outpatient Department (OPD) the clinician needs to provide the education.

2.1.5. For Cornwall Foundation Trust (CFT) hospitals refer to Community Diabetes Specialist Nurse (DSN) team via Bodmin switchboard.

2.1.6. For guidance on the use of steroids during pregnancy please refer to the Diabetes Mellitus (Pre-existing) in Pregnancy Clinical Guideline - Link to document

2.2. Assessment of hyperglycaemia in people taking steroids

No Previous Diagnosis of Diabetes

- Check HBA1c and random blood glucose prior to the commencement of steroids in people perceived to be at high risk.

  e.g. pre-existing type 1 or 2 diabetes, obesity, family history of diabetes, previous gestational diabetes, ethnic minorities, polycystic ovarian syndrome, impaired fasting glucose, and people previously hyperglycaemic with steroid therapy.

- On commencement of steroids recommend CBG [Capillary Blood Glucose] testing once daily preferably pre-lunch or pre-evening meal in those who are high risk or those who display symptoms of hyperglycaemia.

  e.g. increased thirst, increased urination, blurred vision and feeling lethargic.

- If CBG is < 12mmol/L consider the person to be low risk and record CBG daily post breakfast or lunch.
- If CBG consistently <10mmol/L consider discontinuing CBG testing.
- If CBG >12mmol/L increase frequency of glucose testing to x 4 per day.
- If CBG consistently > 12mmol/L (x2 during a 24-hour period) then treatment should be commenced as per the treatment algorithm.

Known Diagnosis of Diabetes

- Review glucose control and current therapy.
- Set CBG target of 6 – 10 mmol/L.
- Check CBG/Glucose 4 times a day and use treatment algorithm to alter diabetes medications accordingly.
- Type 1 diabetes also check for ketones if CBG > 12 mmol/L
- Aim for target range of 6 – 10 mmol/L however 6 – 12 mmol/L is acceptable.

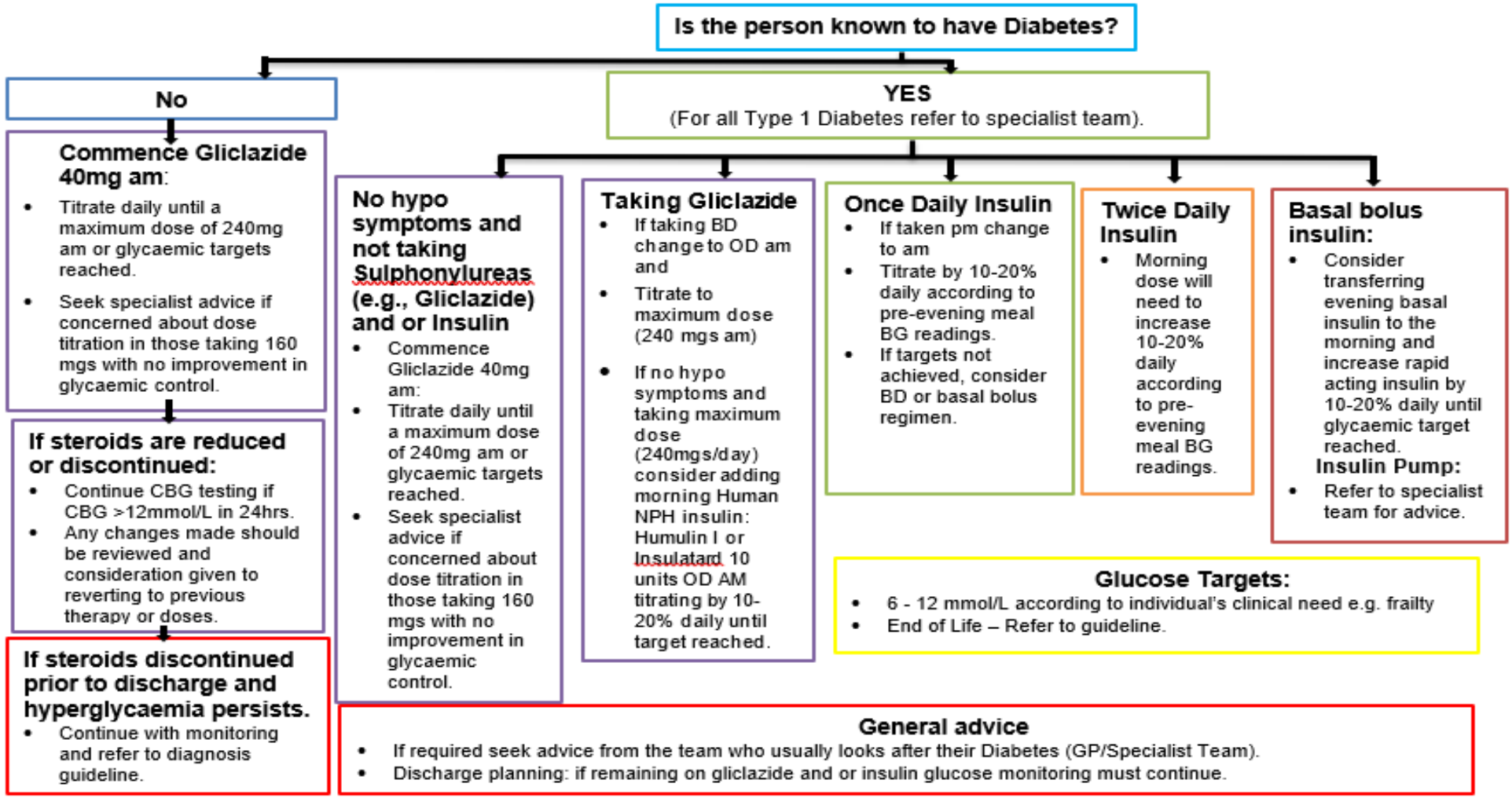
End of Life Care

- Discuss changing the approach of diabetes management with the individual and family/carer if not already done.
- Follow the trust guideline: **Management of Diabetes Mellitus for Adults Requiring End of Life Care Joint Clinical Guideline - Doc Link**

If steroids are reduced or discontinued

- CBG testing may need to be continued. Ensure appropriate follow up for outpatient settings and those people discharged from hospital.
- Any changes should be reviewed, and consideration given to previous therapy or doses of hyperglycaemic medications.
- If unsure at any stage or specific advice required refer to the team who usually look after their diabetes. (GP/Specialist Team).
- Glucose lowering treatments e.g. gliclazide/insulin will need to be reduced in line with reductions in the steroid dosage.

Treatment Algorithm



2.3. Discharge Planning

- Where steroids are continuing after an inpatient stay patients must be educated on: risks associated with hyperglycaemia (signs and symptoms of DKA - diabetic ketoacidosis or HHS hyperosmolar hyperglycaemic state) and hypoglycaemia, blood glucose monitoring frequency ideally 2 – 3 times daily at random times during the day. If the patient is required to check BG due to being on either Sulphonylureas or Insulin and do not have a BG meter, please issues them with a new BGM meter and demonstrate how to use it.

- Provide Hyperglycaemia and Steroid patient leaflet and relevant diabetes information leaflets.

- Refer to healthcare professional previously responsible for diabetes management or if newly diagnosed with diabetes to i.e.: GP, Practice Nurse, or Community Diabetes Specialist Nurse.

- Type 1 Diabetes refer to Diabetes Specialist Team.

- Ensure patient aware to continue blood glucose testing.

3. Monitoring compliance and effectiveness

Information Category	Detail of process and methodology for monitoring compliance
Element to be monitored	Compliance with the relevant process above for patients seen at a Diabetes Team Review.
Lead	Amanda Davis Diabetes Specialist Nurse.
Tool	Patient Documentation.
Frequency	Adult in-patients with diabetes who have had steroids and who are reviewed by the specialist diabetes team.
Reporting arrangements	Non-compliance will be reported to the responsible, ward /area manager. Non-compliance resulting in an adverse patient event will be reported via Datix.
Acting on recommendations and Lead(s)	Ward / area managers will undertake subsequent recommendations and action planning for any or all deficiencies and recommendations within reasonable timeframes for their areas. The Specialist Adult In-Patient Diabetes Team will undertake any trust wide recommendations and action planning for any or all deficiencies and recommendations within reasonable timeframes.
Change in practice and lessons to be shared	Lesson learned or changes to practice will be shared with all the relevant stakeholders.

4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the Equality Diversity And Inclusion Policy or the Equality and Diversity website.

4.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Information Category	Detailed Information
Document Title:	Guideline for the Management of Hyperglycaemia and Steroid Therapy for Adults. V1.0.
This document replaces (exact title of previous version):	New Document.
Date Issued/Approved:	February 2025.
Date Valid From:	February 2025.
Date Valid To:	February 2028.
Directorate/Department responsible (author/owner):	Amanda Davis, Diabetes Specialist Nurse.
Contact details:	01872 253104.
Brief summary of contents:	Guideline for the management of hyperglycaemia and steroid therapy in adults, treatment guidelines and follow up advice.
Suggested Keywords:	Hyperglycaemia, Steroids, Diabetes.
Target Audience:	**RCHT:** Yes **CFT:** No **CIOS ICB:** No
Executive Director responsible for Policy:	Chief Medical Officer.
Approval route for consultation and ratification:	Endocrine Governance. Diabetes Specialist Nurse Team.
Manager confirming approval processes:	Ian Moyle, Head of Nursing (HON), Specialist Services and Surgery (SSS).
Name of Governance Lead confirming consultation and ratification:	Michele Reed.
Links to key external standards:	• National Guidance on the Titration of Diabetes Medications RCN (2012) Professional resources | Diabetes | Royal College of Nursing (rcn.org.uk) • British National Formulary online https://www.bnf.org/products/bnf-online/

Information Category	Detailed Information
	• Electronic Medicines Compendium Medicines.org.uk online https://www.medicines.org.uk/emc/ • Starting injectable treatment in adults with Type 2 Diabetes RCN (2019) Diabetes guidance | Publications | Royal College of Nursing (rcn.org.uk) • NICE clinical knowledge summary Insulin Therapy in type 2 diabetes https://cks.nice.org.uk/insulin-therapy-in-type-2-diabetes#!references/1070523 • NICE clinical knowledge summary Type 1 diabetes https://cks.nice.org.uk/insulin-therapy-in-type-1-diabetes#!scenariorecommendation:6 • Type 1 Diabetes in Adults Diagnosis and Management (NG17) https://www.nice.org.uk/search?q=Type+1+Diabetes • Type 2 Diabetes in Adults Management 2015 (NG28) https://www.nice.org.uk/guidance/ng28
Related Documents:	None.
Training Need Identified?	No.
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet and Intranet
Document Library Folder/Sub Folder:	Clinical / Endocrine.

Version Control Table

Date	Version Number	Summary of Changes	Changes Made by
February 2025.	V1.0.	Initial issue.	Amanda Davis, Diabetes Specialist Nurse (DSN).

All or part of this document can be released under the Freedom of Information Act 2000.

All Policies, Strategies and Operating Procedures, including Business Plans, are to be kept for the lifetime of the organisation plus 6 years.

This document is only valid on the day of printing.

Controlled Document.

This document has been created following the Royal Cornwall Hospitals NHS Trust The Policy on Policies (Development and Management of Knowledge Procedural and Web Documents Policy). It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Equality Impact Assessment

Section 1: Equality Impact Assessment (EIA) Form

The EIA process allows the Trust to identify where a policy or service may have a negative impact on an individual or group of people.

For guidance please refer to the Equality Impact Assessment Policy (available from the document library) or contact the Equality, Diversity, and Inclusion Team rcht.inclusion@nhs.net

Information Category	Detailed Information
Name of the strategy/policy/proposal/service function to be assessed:	Guideline for the Management of Hyperglycaemia and Steroids Therapy in Adults V1.0.
Directorate and service area:	Specialist Services and Surgery/Endocrinology.
Is this a new or existing Policy?	New.
Name of individual completing EIA (Should be completed by an individual with a good understanding of the Service/Policy):	Amanda Davis, Diabetic Specialist Nurse (DSN).
Contact details:	01872 253104.

Information Category	Detailed Information
1. Policy Aim - Who is the Policy aimed at? (The Policy is the Strategy, Policy, Proposal or Service Change to be assessed)	To provide detailed guidance for the management of hyperglycaemia and steroid therapy in adults for healthcare professionals looking after these patients and responsible for treatment decisions.
2. Policy Objectives	To provide a consistent approach to the management of hyperglycaemia and steroid therapy in adults by those responsible for treatment. To maintain patient safety and improve outcomes for adults with hyperglycaemia and steroid therapy.
3. Policy Intended Outcomes	Consistent management of hyperglycaemia and steroid therapy in adults.
4. How will you measure each outcome?	Reporting of incidents.
5. Who is intended to benefit from the policy?	Adults with hyperglycaemia and steroid therapy under the care of RCHT both inpatient and outpatient settings.

Information Category	Detailed Information
6a. Who did you consult with? (Please select Yes or No for each category)	• Workforce: Yes • Patients/visitors: No • Local groups/system partners: Yes • External organisations: No • Other: No
6b. Please list the individuals/groups who have been consulted about this policy.	**Please record specific names of individuals/groups:** • Diabetes Specialist Nurse Team. • Endocrine Governance. • Endocrine Consultants.
6c. What was the outcome of the consultation?	Agreed.
6d. Have you used any of the following to assist your assessment?	**National or local statistics, audits, activity reports, process maps, complaints, staff, or patient surveys:** No.

7. The Impact

Following consultation with key groups, has a negative impact been identified for any protected characteristic? Please note that a rationale is required for each one.

Where a negative impact is identified without rationale, the key groups will need to be consulted again.

Protected Characteristic	(Yes or No)	Rationale
Age	No	
Sex (male or female)	No	
Gender reassignment (Transgender, non-binary, gender fluid etc.)	No	
Race	No	
Disability (e.g. physical or cognitive impairment, mental health, long term conditions etc.)	No	
Religion or belief	No	
Marriage and civil partnership	No	

Protected Characteristic	(Yes or No)	Rationale
Pregnancy and maternity	No	
Sexual orientation (e.g. gay, straight, bisexual, lesbian etc.)	Choose.	

A robust rationale must be in place for all protected characteristics. If a negative impact has been identified, please complete section 2. If no negative impact has been identified and if this is not a major service change, you can end the assessment here.

I am confident that section 2 of this EIA does not need completing as there are no highlighted risks of negative impact occurring because of this policy.

Name of person confirming result of initial impact assessment: **Amanda Davis,**

Diabetes Specialist Nurse.

If a negative impact has been identified above OR this is a major service change, you will need to complete section 2 of the EIA form available here:
Section 2. Full Equality Analysis

Appendix 3. Contact

Contact Diabetes In-Patient Nurse Team during normal working hours via referral on Maxims, Bleep 3825 or Telephone 01872 253104.

Contact Grenville ward via telephone extension 2010