Whittington Health NHS

Hypoglycaemia Management for Adult Inpatients with Diabetes

Subject:	Hypoglycaemia Management for Adult inpatients with Diabetes
Policy Number	N/A
Ratified By:	Clinical Guidelines Committee
Date Ratified:	May 2011 (Original) Review August 2013
Version:	2.0
Policy Executive Owner:	Divisional Director ICAM
Designation of Author:	Dr Maria Barnard (Lead Consultant in Diabetes) Elly Baker (Lead Inpatient Diabetes Specialist Nurse)
Name of Assurance Committee:	Clinical Guidelines Committee
Date Issued:	August 2013
Review Date:	3 years hence
Target Audience:	All health care professionals caring for adult inpatients with diabetes.
Key Words:	Hypoglycaemia, Capillary blood glucose (CBG)

Version Control Sheet

Version	Date	Author	Status	Comment
1.0	May 2011	Dr Maria Barnard (Lead Consultant in Diabetes) Elly Baker (Lead Inpatient Diabetes Specialist Nurse)	Off-line	Due for review
2.0	Aug 2013	Dr Maria Barnard (Lead Consultant in Diabetes) Elly Baker (Lead Inpatient Diabetes Specialist Nurse)	On-line	• Page 3- *Based on recommendation by NHS diabetes, Hypoglycaemia Kits were introduced on the wards in April 2012*[2]. • Page 5- Under severe hypo algorithm *Check airways. Place patient in recovery position.* ***Contact doctor****. Give 150-160mls 10% Glucose IV *(if patient has IV access) over 10-15 minutes, or, if suitable, give **Glucagon 1mg (subcutaneously, IM or IV) until able to drink and swallow .* ** If patient has IV access, IV Glucose is preferable to Glucagon.* *** Glucagon is contraindicated in patients with Phaeochoromocytoma and may be ineffective in chronic hypoglycaemia, starvation, and adrenal insufficiency*[4]. • Page 6- reference 4 3. *BNF online, July 2013* http://www.medicinescomplete.com

➢ Criteria for use

For all adult inpatients (>16 years old) with diabetes

➢ Background/ introduction

- Hypoglycaemia in patients with diabetes occurs when the blood glucose is too low, usually below 4 mmol/l (This level is different to the biochemical definition of hypoglycaemia used in patients without diabetes).

- Hypoglycaemia is a common complication of glucose lowering therapies, particularly insulin and sulphonylureas.

- Elderly patients or those with renal impairment are at particular risk of hypoglycaemia.

- Audit on hypoglycaemia management carried out in The Whittington Hospital in December 2007 showed that:

  - Wards are using a variety of treatments to correct mild to moderate hypoglycaemia, which reflects on availability.

  - They are often using the most expensive method (Glucogel) to correct moderate hypoglycaemia when the patient is co-operative.

- There are suggested protocols for treating hypoglycaemia[1,2,3].

- Based on recommendation by NHS diabetes, Hypoglycaemia Kits were introduced on the wards in April 2012[2].

➢ Inclusion/ exclusion criteria

Inclusion criteria: Adult inpatients (>16 years old) with diabetes and hypoglycaemia.

Exclusion criteria: Children.

➢ Clinical management

Treatment for Hypoglycaemia for patients with Capillary Blood Glucose (CBG) less than 4 mmol/L

Mild	Moderate	Severe
Patient is conscious, able to swallow and cooperative.	Patient is conscious, can swallow, but in need of assistance.	Patient is unconscious and/or unable to swallow.
Step 1		
Give 3 dextrose tablets or 100 ml of Lucozade.	Treat with 1 to 2 tubes of Glucogel.	Check airways. Place patient in recovery position. **Contact doctor**. Give 150-160mls 10% Glucose IV *(if patient has IV access) over 10-15 minutes, or, if suitable, give **Glucagon 1mg (subcutaneously, IM or IV) until able to drink and swallow .
Step 2		
Wait 10 minutes, recheck CBG and record. If still below 4 mmol/L or if no physical improvement repeat step 1.		Once patient is conscious, give sips of Lucozade and recheck glucose level every 10 minutes to ensure CBG levels have increased to 4 mmol/l.

Always follow up with slowly digested/starchy carbohydrate.

Check glucose level. Once it is 4 mmol/l or above and patient has recovered, give **ONE** of the following:

1 slice of bread; half a sandwich; a very small bowl of cereal; a glass of milk with 1 Rich Tea biscuit; or 1 banana.

Note: Doses of insulin and tablets will need to be reviewed following an episode of hypoglycaemia. Please contact DSN (bleep 2706) or doctor to get advice.

After acute treatment

Do regular CBG monitoring (pre meals and pre bed) for 24 -48 hours. Patients must continue this at home if they are discharged.

Hypoglycaemia maybe prolonged if caused by long acting insulin or sulphonylurea, particularly in renal failure. Patients may need a continuous infusion of 5% Glucose to maintain CBG levels.

* If patient has IV access, IV Glucose is preferable to Glucagon.

** Glucagon is contraindicated in patients with Phaeochoromocytoma and may be ineffective in chronic hypoglycaemia, starvation, and adrenal insufficiency[4].

➢ Further information

Immediate advice is available during working hours from the Lead Inpatient Diabetes Specialist Nurse (DSN), Bleep 2706

➢ Contacts (inside and outside the Trust including out-of-hours contacts)

During working hours:

Lead Diabetes Specialist Nurse Bleep 2706, ext 3344

Diabetes Specialist Registrar Bleep 3086, 3147

Diabetes Consultants ext 5218

Outside working hours:

On call medical team

➢ References

1. Baldwin E.J, Feher, M.D Sweets, fluids and food in the treatment of mild hypoglaemia. *Practical diabetes international* 2006 , Vol 23, N 5, p 218-220

2. The Hospital management of Hypoglycaemia in Adults with Diabetes Mellitus – NHS diabetes, March 2010 . www.diabetes.nhs.uk

3. Guidelines for the management of diabetes. Ed. Barnard M, April 2005. Available at: http://www.whittington.nhs.uk/diabetes and Whittington Hospital Intranet.

4. BNF online, July 2013 http://www.medicinescomplete.com

To be completed and attached to any procedural document when submitted to the appropriate committee for consideration and approval

		Yes/No	Comments
1.	**Does the procedural document affect one group less or more favourably than another on the basis of:**		
	• Race	No	
	• Ethnic origins (including gypsies and travellers)	No	
	• Nationality	No	
	• Gender	No	
	• Culture	No	
	• Religion or belief	No	
	• Sexual orientation including lesbian, gay and bisexual people	No	
	• Age	No	
	• Disability - learning disabilities, physical disability, sensory impairment and mental health problems	No	
2.	**Is there any evidence that some groups are affected differently?**	No	
3.	**If you have identified potential discrimination, are any exceptions valid, legal and/or justifiable?**	No	
4.	**Is the impact of the procedural document likely to be negative?**	No	
5.	**If so can the impact be avoided?**	N/A	
6.	**What alternatives are there to achieving the procedural document without the impact?**	N/A	
7.	**Can we reduce the impact by taking different action?**	N/A	

If you have identified a potential discriminatory impact of this procedural document, please refer it to the Director of Human Resources, together with any suggestions as to the action required to avoid/reduce this impact.

For advice in respect of answering the above questions, please contact the Director of Human Resources.

Checklist for the Review and Approval of Procedural Document

To be completed and attached to any procedural document when submitted to the relevant committee for consideration and approval.

	Title of document being reviewed:	Yes/No	Comments
1.	**Title**		
	Is the title clear and unambiguous?	Yes	
	Is it clear whether the document is a guideline, policy, protocol or standard?	Yes	
2.	**Rationale**		
	Are reasons for development of the document stated?	Yes	
3.	**Development Process**		
	Is it clear that the relevant people/groups have been involved in the development of the document?	Yes	
	Are people involved in the development?	Yes	
	Is there evidence of consultation with stakeholders and users?	Yes	
4.	**Content**		
	Is the objective of the document clear?	Yes	
	Is the target population clear and unambiguous?	Yes	
	Are the intended outcomes described?	Yes	
5.	**Evidence Base**		
	Are key references cited in full?	N/A	
	Are supporting documents referenced?	N/A	
6.	**Approval**		
	Does the document identify which committee/ group will approve it?	Yes	
7.	**Dissemination and Implementation**		
	Is there an outline/plan to identify how this will be done?	Yes	
8.	**Document Control**		
	Does the document identify where it will be held?	Yes	
9.	**Process to Monitor Compliance and Effectiveness**		
	Are there measurable standards or KPIs to support the monitoring of compliance with and	Yes	

	Title of document being reviewed:	Yes/No	Comments
	effectiveness of the document?		
	Is there a plan to review or audit compliance with the document?	Yes	
10.	**Review Date**		
	Is the review date identified?	Yes	
	Is the frequency of review identified? If so is it acceptable?	Yes	
11.	**Overall Responsibility for the Document**		
	Is it clear who will be responsible for co-ordinating the dissemination, implementation and review of the document?	Yes	

Executive Sponsor Approval			
If you approve the document, please sign and date it and forward to the author. Procedural documents will not be forwarded for ratification without Executive Sponsor Approval			
Name		Date	
Signature			
Relevant Committee Approval			
The Director of Nursing and Patient Experience's signature below confirms that this procedural document was ratified by the appropriate Governance Committee.			
Name		Date	
Signature			
Responsible Committee Approval – only applies to reviewed procedural documents with minor changes			
The Committee Chair's signature below confirms that this procedural document was ratified by the responsible Committee			
Name		Date	
Name of Committee		Name & role of Committee Chair	
Signature			

Tool to Develop Monitoring Arrangements for Policies and guidelines

What key element(s) need(s) monitoring as per local approved policy or guidance?	**Who will lead on this aspect of monitoring?** **Name the lead and what is the role of the multidisciplinary team or others if any.**	**What tool will be used to monitor/check/observe/Asses s/inspect/ authenticate that everything is working according to this key element from the approved policy?**	**How often is the need to monitor each element?** **How often is the need complete a report ?** **How often is the need to share the report?**	**What committee will the completed report go to?**
Element to be monitored	**Lead**	**Tool**	**Frequency**	**Reporting arrangements**
All patients who have a hypoglycaemic attack should be treated appropriately based on these guidelines. Staff should use Hypo Kits when treating patients with Hypoglycaemia.	Elly Baker – Lead Diabetes Specialist Nurse for inpatients	Basic audit tools	-Biannually	Clinical guidelines committee