

Management of Hypoglycaemia in inpatients in University Hospital Llandough:

Impact of Implementation of the "Hypo Sticker"



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Introduction

Hypoglycaemia is a well recognised complication of the medical management of diabetes mellitus. It is frequently seen in patients who are treated with insulin therapy and certain oral hypoglycaemic agents (e.g sulphonylureas). It is becoming more common, as up to 1 in 6 medical inpatients have Diabetes Mellitus(1).



Aims and Objectives

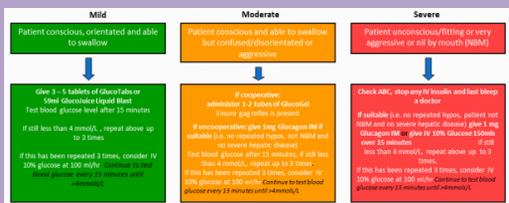
To assess the impact of introducing the "hypo-sticker" on the management of hypoglycaemia for medical patients in University Hospital Llandough.

Objectives to be met included the following:

- 100% hypoglycaemia events are recorded in the medical notes and managed according to treatment guidelines
- 100% hypoglycaemic events have their blood glucose (BM) checked within 30 minutes of the event being recorded
- 100% hypoglycaemic events are noted by the medical team at next review.

Standard

The Joint British Diabetes Society guideline on the hospital management of hypoglycaemia in adults with diabetes mellitus helps guide medical and nursing staff on providing the best standard of care for this condition. The below flow chart outlines immediate management of hypoglycaemia.



Method

- Data on all diabetic in-patients was collected over two day period, two weeks apart.
- Notes and bedside blood glucose charts were reviewed to identify hypoglycaemic events.
- For each event, data was collected on documented time, treatment given, compliance with guidelines, time to repeat, medical review and alteration to diabetic medication.
- A "Hypo-sticker" was designed, and distributed for use on medical wards, and medical and nursing staff were trained on management of hypoglycaemia.
- A re-audit was performed following the above implemented changes.

**** HYPOLYCAEMIA ****

Time	
Date	
Blood Glucose	
Severity	severe / moderate / mild
Initial treatment	
Time rechecked	
2 nd blood glucose	

Once blood glucose > 4mmol/L please list subsequent carbohydrate treatment

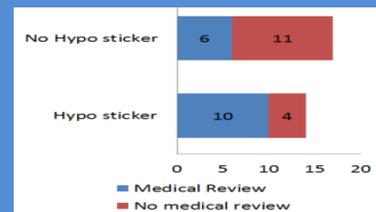
For a further supply of stickers please contact
Claire O'Neill 09811

Results

Below is a table summarising results before and after implemented changes. Chart 1 demonstrates the impact that the "hypo sticker" has on medical management of hypoglycaemia. When comparing cases that did not use the hypoglycaemia sticker versus those that did, there is a clear increased chance of the medical team noting the event.

	Previous Audit	Re-audit (after implementation of hypoglycaemia sticker)
% Patients with DM	22.5%	19.6%
Total number of Hypoglycaemic episodes	49	31
Age Range (years)	22-96	55 - 92
Median Age (years)	72	68
Preadmission Treatment of Diabetes Mellitus	Insulin (60.86%) Oral (34.78%) Other (4.34%)	Insulin (64.5%) Oral (25.8%) Combination (6.5%) Other (3.2%)
Hypo documented in notes	Yes (34.69%) No (65.3%)	Yes (74.19%) No (25.81%)
Hypo Sticker used?	N/A	Yes (45.2%) No (64.8%)
Treated according to guidelines?	Yes (32.7%) No / not documented (67.3%)	Yes (64.5%) No / not documented (35.5%)
BM Rechecked 30 mins after treatment	Yes (37.5%) No (12.5%) Not documented (50%)	Yes (50%) No (30%) Not documented (20%)
Hypo noted by medical team on next review	Yes (30.61%) No (69.38%)	Yes (51.6%) No (48.4%)

Chart 1. Impact of "Hypo Sticker" on medical review of hypoglycaemic event



Conclusion

It is clear that introduction of the "Hypo sticker" has improved documentation as well as both immediate and long term management of hypoglycaemia. More cases are documented in the notes and treated according to guidelines, which has resulted in timely re-measurement of blood glucose (within 30 minutes). This has improved the number of cases that are noted by the medical team on next review, and hence reduction of further hypoglycaemic events.

References:

1. Joint British Society Diabetes: The Hospital Management of hypoglycaemia in Adults with Diabetes Mellitus. March 2010