INTRODUCTION

Hypoglycaemia is defined as a blood glucose (BG) <4 mmol/L. Hypoglycaemic events in hospital inpatients with Diabetes Mellitus have been associated with increased morbidity and mortality and increased length of stay. In the National Inpatient Diabetes Audit 2013, 15.8% of hospital in-patients had a diagnosis of diabetes. Of those patients, 22% experienced at least one hypoglycaemic episode. Internationally, it had been reported that events were not treated as per evidence base.

AIMS & OBJECTIVES

• Determine the proportion of hypoglycaemic events treated in line with hospital protocol.
• Implement quality improvement initiatives.
• Determine whether implementation of quality improvement initiatives improved the management of hypoglycaemic events and compliance with local protocol.

METHODS

• Local ethical approval was obtained.
• The sample size was chosen to detect a 25% improvement with ±8% precision.
• Baseline adherence to the hospital hypoglycaemic protocol was determined by analysis of 148 retrospective hypoglycaemic events which were observed in a sampling frame of 459 general medical and surgical inpatient beds over a five-week period.
• Educational interventions were undertaken:
  o An evidence-based protocol was developed and approved by the Drugs and Therapeutics Committee (figure 1)
  o Nursing Forum Presentation
  o Medication Safety Alert and Hypoglycaemia Competition Quiz with prize were developed (figure 2)
• A reaudit was undertaken on 151 hypoglycaemic events using the same sampling frame assessing adherence to the new protocol.

RESULTS

• 73% (n=108) of hypoglycaemic events in the baseline audit were treated with a short acting carbohydrate compared with 81% (n=123) in the reaudit (P<0.05).
• Lucozade® was the predominant short acting carbohydrate used to treat hypoglycaemic events throughout the study, (n=105, 71% in the baseline audit, n=119, 79% in the reaudit). Of those events treated with Lucozade®, 33% (n=49) were treated with the recommended amount in the baseline audit, increasing to 71% (n=106) in the reaudit (P<0.05) (figure 3).

CONCLUSION

• We established that hypoglycaemic events are common among our inpatients.
• The proportion of events that were treated in line with hospital protocol was low in the baseline audit.
• The provision of a clear, colour coded evidence based hypoglycaemia protocol and a multifaceted educational drive, improved management of hypoglycaemia, in particular the amount of short acting carbohydrate given and time to BG retesting. This has improved patient safety.
• Continued improvement initiatives are required.

REFERENCES:

DISCLOSURE:
Authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.

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