The utility of blood glucose monitoring on a general medical take
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Objective:
Various studies have reported that better control of hyperglycaemia in the hospital setting decreases short and long-term risk of mortality, illness complications, hospital lengths of stay, and healthcare costs. The aim of this audit was to determine the use of glucose screening within the accident and emergency department (A+E), the medical admissions unit (MAU), and laboratory glucose monitoring for all admitted patients. We set a standard that 100% of patients should have a blood glucose level tested, which is recommended from the clinical practice guidelines from the Endocrine Society. We also aimed to determine association with blood glucose levels and length of hospital stay/mortality, and to compare the results with an audit carried out 6 months previously using the same methods, in an effort determine if any improvements had been made.

Methods:
We reviewed the charts and laboratory values for the first 100 admissions onto the MAU from the acute medical take over a one month period. We recorded general demographic details, diagnosis of diabetes, length of hospital stay, mortality, and blood glucose monitoring in A+E, MAU and laboratory values.

Results:
Of the 100 patients sampled, there were 37 male and 63 female, with age range 15-98 and average age of 65.56. Of those admissions, 19% (19/100) were known type 2 diabetics, 2% (2/100) were known type 1 diabetics, and 79% (79/100) were not known diabetic. Of those admitted 30% (30/100) had a blood glucose checked in A+E, 91% (91/100) had a blood glucose checked on MAU, and 78% (78/100) had a laboratory glucose checked during the admission. The average length of stay was 8.3 days, ranging from 1-43 days. There were 7 recorded deaths, with average blood glucose of 7.1mmol/l and range of blood glucose 5.6 – 10.1mmol/l.

Conclusions:
The monitoring of blood glucose on the MAU has improved from 75% (48/64) to 91% following the introduction of recommendations from an audit using the same methods six months previously. The measurement of laboratory glucose, and the use of blood glucose monitoring in the A+E department could, however, be improved.

As part of our recommendations, we presented the data to the staff in the medical assessment unit and plan to present the data to staff in the accident and emergency department, in an effort to improve blood glucose monitoring of all hospital admissions. We plan to reaudit to see if any improvements have been made.

There was no association with blood glucose level and length of hospital stay/mortality; however our sample size was small.

References: