One in six hospital beds in the UK is occupied by an inpatient with diabetes (HSCIC 2013)

Hypoglycaemia is the most common side-effect of therapy with insulin and oral hypoglycaemic agents (Walden and Stanisstreet 2010)

Almost one in four inpatients with diabetes experiences episodes of hypoglycaemia during their hospital stay (JBDS 2010)

Hypoglycaemia is associated with higher morbidity and mortality and increased length of hospital stay (JBDS 2010)

Hypoglycaemia is a medical emergency and requires immediate treatment (McMahon and Smith 2012)

All episodes of blood glucose levels ≤ 4 mmol/L should be treated in adults with diabetes to avoid potential hypoglycaemia (JBDS 2010)

Guidelines for the management of inpatient hypoglycaemia have been published including a visual traffic-light Hypoglycaemia Algorithm (JBDS 2010)

Areas of good practice have introduced Hypo Boxes containing all equipment for the initial management of acute hypoglycaemia (JBDS 2010)

34.3% of hypoglycaemic episodes amongst hospitalized people with diabetes occur overnight (between 22:00 and 08:00) (HSCIC 2013)

Low glucose levels in hospitalized patients are not being recognised or addressed (HSCIC 2013)

After introducing the Hypo Box and the Hypoglycaemia Algorithm, local audits showed that:

- 35% of staff were unaware of the need to provide treatment when blood glucose ≤ 4.0 mmol/L (MacMahon and Smith 2012)
- 14% of staff were unaware of how to treat an hypoglycaemic episode correctly (MacMahon and Smith 2012)
- In 56% of the cases the Hypoglycaemia Algorithm was not followed correctly (Gashau 2009)

<table>
<thead>
<tr>
<th>Colour-coded monitoring chart that triggers nursing interventions at:</th>
<th>PROPOSED INNOVATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>bedtime when blood glucose ≤ 8 mmol/L (YELLOW) and when blood glucose ≤ 4 mmol/L (RED) at any other time</td>
<td></td>
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</tbody>
</table>

Hypoglycaemia Algorithm based upon national guidelines (JBDS 2010) printed at the back of the monitoring chart as a memory aid

MILD | MODERATE | SEVERE

EXPECTED IMPACT ON SERVICE

A reduction in the number of hypoglycaemic events occurring overnight

An increase in staff knowledge of and compliance with national guidelines for the management of inpatient hypoglycaemia

EVALUATION OF OUTCOMES

Audit of the number of hypoglycaemic episodes overnight

Audit of staff compliance with the Hypoglycaemia Algorithm

On-spot questionnaires to test staff knowledge on hypoglycaemia management

References


