Hypoglycaemia in type 2 diabetes: an audit of insulin and sulfonylurea use by patients with HbA1c < 53mmol/mol

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Discussion

The diabetic team was not specifically informed of sudden deteriorations in their patients (e.g. stroke), so these would often go unnoticed until the next annual diabetic review was due. The reviews were organised by sending SMS messages to patients but there was usually no escalation to phone or letter if these attempts failed, which meant a small number of patients had not a review for several years, despite still using the practice for other purposes.

Furthermore, some patients appeared reluctant to modify their treatment to accord with current practice. For example, two patients with gliclazide prescriptions dating from 2003 were unwilling to try newer medication. A further patient with a decade old insulin prescription confessed to aiming for a blood glucose of 4mmol/L, despite being repeatedly advised about the dangers of hypoglycaemia.

The practice could potentially improve care by offering diabetic reviews after significant changes in health and by exploring alternative ways to contact patients who do not respond to initial attempts.

Methods

The audit was conducted at a large primary care practice in south England. EMIS Web was used to identify adult patients with diabetes mellitus type 2, a last recorded HbA1c of < 53mmol/mol and an active prescription of insulin or a sulfonylurea. The analysis consisted of an extensive manual review of patient’s primary care records where all information relevant to hypoglycaemia risk was noted.

Results

- All registered patients (n = 15,796)
- Adult type 2 diabetics (n = 714)
- HbA1c < 53mmol/mol (n = 278)
  - Insulin prescription (n = 21)
  - Gliclazide prescription (n = 17)

A validated tool was used to calculate the annual risk of severe hypoglycaemia for the 38 patients on insulin or gliclazide with a HbA1c < 53mmol/mol.

There were 5 patients with an annual risk of severe hypoglycaemia greater than 5% and a further 11 patients had an annual risk of 1-5%.

Example Patient

An elderly female patient who had multiple strokes in 2020 and is now bedbound in a care home. She remained on gliclazide 240mg daily despite a recent HbA1c of 33mmol/mol.