

In-patient care for children with type 1 diabetes across hospitals in the Yorkshire and Humber region in the north of England

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Introduction

An important part of diabetes management is maintaining high standards of in-patient care. The first inpatient standards for management of children with diabetes were set and audited in the South of England in 2011¹.

Deficiencies highlighted were: lack of dietetic advice on wards, lack of education sessions for ED and ward staff and lack of contact with diabetes team especially for overnight admissions

Aims

Identification of variations in in-patient care provided to children with type 1 diabetes across the Yorkshire and Humber region, with a view to standardisation of care.

Methods

The audit was conducted against in-patient care standards identified by the Children and Young Person's Diabetes Implementation Support Group (CYPDISG). Questionnaires were sent to clinical leads of all paediatric diabetes units in the region, which serves a total of 2599 children and young people with diabetes.

Results

Sixty three per cent of the units, consisting of 2 tertiary and 8 secondary care units, responded. Paediatric wards and EDs in all units had protocols for management of new diagnosis of diabetes, diabetic ketoacidosis (DKA), hypoglycaemia and surgery. The following table illustrates availability of protocols.

Centre	DKA protocol	Surgery protocol	New diagnosis protocol	Hypoglycaemia protocol	Protocols available on wards	Protocols available in ED	HDU/PICU protocols
Tertiary centre	Y	Y	Y	Y	Y	Y	Y
Tertiary centre	Y	Y	Y	Not specific for diabetes	Y	Y	HDU- Y PICU- N
DGH	Y	Y	Y	Y	Y	Y	n/a
DGH	Y	Y	Y	Y	Y	Y	n/a
DGH	Y	Y	Y	Y	Y	Y	Y
DGH	Y	Y	Y	Y	Y	Y	Y
DGH	Y	Y	Y	Y	Y	Y	Y
DGH	Y	Y	Y	Y	Y	Y	Y
DGH	Y	Y	Y	Y	Y	Y	Y
DGH	Y	Y	Y	Y	Y	Y	Y

Results

Nine out of 10 units had paediatric nurses in areas where children were cared for, but only the tertiary centres had a trained paediatric nurse in the emergency department (ED) on every shift. A 24 hour on-call service was only provided by 40% of the units. The diabetes team was usually contacted within 2 hours of an admission in tertiary centres and within 24 hours in secondary care units. Paediatric diabetes specialist nurses (DSN) had an active role in in-patient management in all units.

Centre	Parents allowed to manage diabetes on ward	Link nurse on each ward	DSN have inpatient role	Dietetic support available on ward	Children's nurse in all areas	Admissions to same ward when possible	24 hour access to diabetes specialist
Tertiary centre	Y	Y	Y	Y	Y	Y	Y
Tertiary centre	Y	Y	Y	Y	Y	Y	Y
DGH	Y	N	Y	Y	Y	Y	N
DGH	Y	N	Not for DKA	Y	N	Y	N
DGH	Y	Y	Y	Y	Y	Y	Y
DGH	Y	Y	Y	Y	Y	Y	Y
DGH	Y	Y	Y	Y	Y	Y	7.00-20.00 OOH-Escalation policy
DGH	Y	Y	Y	Y	Y	Y	9.00-21.00 OOH-Escalation policy
DGH	Y	Y	Y	Y	Y	Y	N
DGH	Y	Y	Y	Y	Y	Y	N

All units had regular education sessions for ward staff, although 20% expressed concerns regarding poor attendance and 50% of units had education sessions for ED staff. Only 2 units had insulin prescription charts and only tertiary centres routinely audited insulin prescription and administration errors.

Centre	Insulin prescription charts	Audit of insulin prescription errors	Education- ED staff	Liaison with ED	Regular education sessions for ward staff
Tertiary centre	N	Y	Y	Y	Y
Tertiary centre	Y	Y	Y	Y	Y
DGH	N	N	Y	Y	Y
DGH	N	N	Y	N	Y
DGH	N	N	N	Y	Y
DGH	N	N	N	Y	Y
DGH	Y	N	Y	Y	Y
DGH	N	N	N	Y	Y
DGH	N	N	N	Y	Y

Conclusions

This audit demonstrates on-going difficulties achieving current standards of in-patient care for children and young people with diabetes. There is a lack of 24 hour on-call service in majority of the paediatric diabetes units. There needs to be standardisation across the region and feasibility of implementation needs to be explored.