

Diagnosing diabetes in children and young people

Position Statement (Updated: July 2018)

Why have we produced this position statement

There are around 35,500 children under the age of 19 with diabetes in the UK. The vast majority have Type 1, but other forms of diabetes can also affect children. There are known difficulties in diagnosing Type 1 diabetes promptly, and recognising the rarer forms in children.

How did we develop this position?

We developed this position through knowledge gained from:

- Reviewing the relevant literature
- Reviewing current NPDA data
- Discussions with expert clinicians through Diabetes UK's Council of Healthcare Professionals and expert paediatric diabetes clinicians

We gained further insight by engaging with parents and children through focus groups, events and social media to find out their experiences.

What we say about this issue

Any child found to have high blood glucose levels by non-specialist staff should be assumed to have Type 1 and be seen by the specialist paediatric diabetes team the same day. Specialist paediatric diabetes teams may consider other forms of diabetes if appropriate.

Making sure that parents, carers and non-specialist healthcare professionals recognise the classic symptoms of Type 1 diabetes is crucial.

Recommendations

- All GP's, primary healthcare professionals, health visitors, school nurses and other non-specialist healthcare professionals should be educated in the symptoms and management of Type 1 diabetes.
- Parents of children with any of the symptoms of Type 1 diabetes should see a doctor straight away for immediate capillary blood glucose testing. Urine glucose testing should only be performed if a child can void immediately, and will always require confirmation by a capillary blood glucose test.
- A capillary blood test should be taken immediately for any child presenting with any symptom of Type 1 diabetes. Waiting for a fasting blood glucose level is not appropriate and the HbA1c test should not be used to diagnose Type 1 diabetes in children.

- Particular caution should be taken for children under 2, as they may not display classic symptoms of Type 1 diabetes.
- All primary health care staff must have access to a blood glucose monitor and be educated in its use.
- Any child suspected to have Type 1 diabetes should be seen on the same day by a specialist paediatric diabetes team for confirmation of the diagnosis and management.
- Specialist paediatric diabetes teams should be aware of the rarer forms of diabetes (such as monogenic diabetes), and to refer children with signs of these rarer forms for specialist testing and management. Further information can be found at www.diabetesgenes.org
- Specialist services for paediatric diabetes which meet national standards should be commissioned.
- The number of children diagnosed in DKA is included in the National Paediatric Diabetes Audit dataset in England and Wales. The equivalent data should be made available annually in Scotland and Northern Ireland.

Evidence and analysis

Type 1 diabetes

The latest National Paediatric Diabetes Audit (NPDA) report shows that around 95.1% of children in England and Wales have Type 1, and 23% of all children are not diagnosed with Type 1 diabetes until they are in Diabetic Ketoacidosis (DKA)⁽¹⁾.

Children can develop DKA within 24-48 hours of first presentation with the symptoms of Type 1 diabetes, with the under 2s most at risk ⁽²⁾.

The classic symptoms of Type 1 diabetes are frequent urination/bedwetting in a previously dry child, excessive thirst, excessive tiredness and weight loss. Children and young people will not necessarily display all symptoms at the same time, and symptoms may vary depending on the age of the child ^(2,3,4).

Other forms of diabetes

Type 1 diabetes is by far the most common form of diabetes in children and young people, accounting for 95.1% of all cases⁽¹⁾. Other forms of diabetes occur rarely in children and young people. It is estimated that 2.5% have Type 2 diabetes, 0.6% Monogenic diabetes and 0.6% Cystic Fibrosis related diabetes ⁽¹⁾. A further 1.6% have another form or their diagnosis is not defined⁽¹⁾.

Type 2 diabetes in European children is characterised by:

- Diabetes presenting in the second decade of life and rarely before puberty
- A family history of Type 2 diabetes in first and second degree relatives
- A greater prevalence in non-White Europeans
- A BMI >85th percentile
- Lower socioeconomic and educational status ⁽⁵⁾

MODY is characterised by:

- Diabetes that develops before the age of 25
- Diabetes that runs in families from one generation to the next
- Diabetes that may be treated with diet and tablets and may not always require insulin⁽⁶⁾

Neonatal diabetes is characterised by:

- Diabetes that is diagnosed before the age of six months⁽⁶⁾

References

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