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# National Paediatric Diabetes Audit

Commissioned by the  
Healthcare Quality Improvement Partnership  
Managed by the  
Royal College of Paediatrics and Child Health





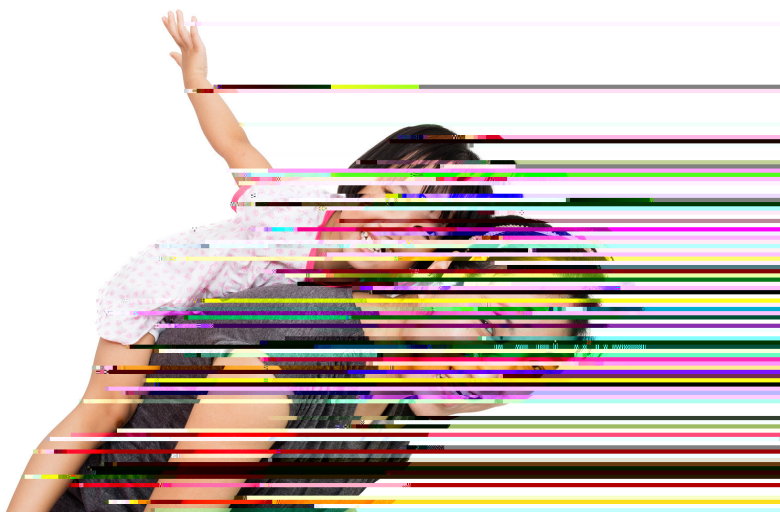
## Common differences between Type 1 and Type 2 diabetes:

### Type 1 diabetes

- Often diagnosed in childhood
- Not associated with excess body weight
- Usually associated with higher than normal ketone levels at diagnosis
- Treated with insulin injections or insulin via a pump
- Cannot be controlled without taking insulin

### Type 2 diabetes

- Usually diagnosed in people aged over 30





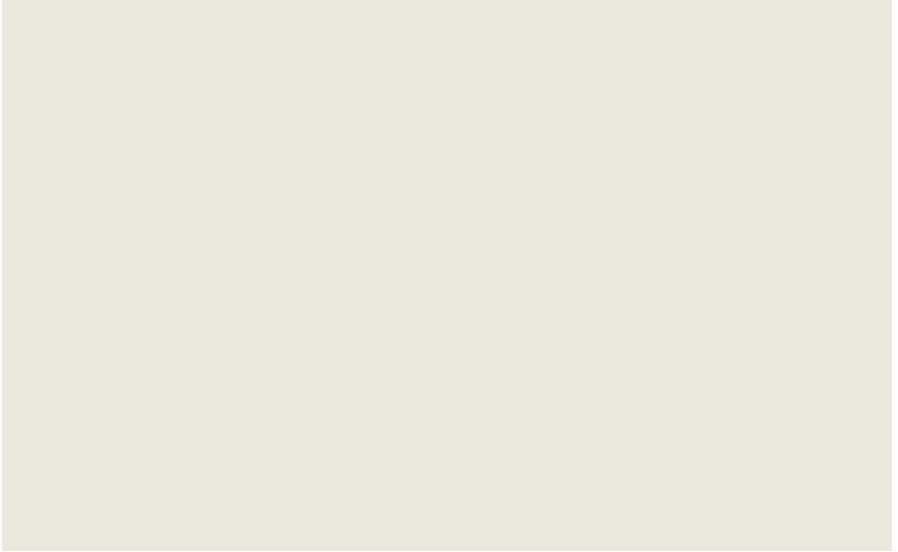
## Completion rates of key checks

The NPDA investigated how many children and young people with diabetes were receiving the key healthcare checks in this audit year (2014-15).

The key healthcare checks listed below are performed to monitor a child with diabetes. They enable clinicians to look for early warning signs that the child might be developing complications so that appropriate advice can be given and action taken. Some of the checks are for all ages and some are for young people aged 12 and above. These should be continued annually into adulthood.

### List of key healthcare checks:

1. HbA1c (for all ages – a measure of blood glucose control)
2. Height and weight (for all ages – a check for healthy growth)
3. Blood pressure – a check for hypertension (high blood pressure)
4. Urinary albumin – a check for kidney damage
5. Cholesterol – a check for high cholesterol
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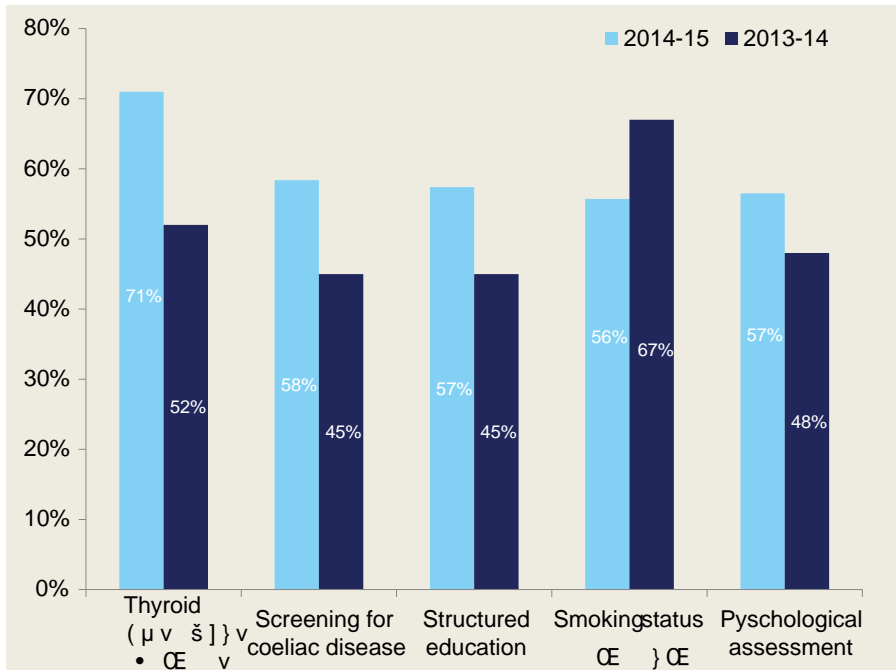
There are ve further important key healthcare checks which the NPDA have reported this year.

1. Thyroid and coeliac disease screening for children and young people with Type 1 diabetes is important because the risk of developing these diseases is increased.
2. Smoking is bad for anyone's health and it increases the risk of developing diabetes complications. Recording whether or not the patient smokes is important so that education packages aimed at reducing smoking can be offered if necessary.
3. Psychological assessment is important for children and young people with diabetes since problems such as depression and eating disorders are more common.
4. Structured self-management education enables children, young people and their parents to understand how to keep blood glucose under control and how to avoid diabetes complications. It is important to check whether this has been received.





The percentage of children and young people with diabetes that are receiving each of these five key healthcare checks or care processes:



## What does this mean?

- ✦ Not all children and young people with diabetes are being checked every year for warning signs associated with risk of developing diabetes complications.
- ✦ Parents and carers should ask their diabetes team about their child's completion of the key healthcare checks as part of an annual assessment. Finding problems early can reduce the risk of further complications later.

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Collecting information on outcome measures is an important part of monitoring diabetes control and care.

## HbA1c

HbA1c refers to glycated haemoglobin. Measuring this gives an overall picture of diabetes control. It is an indicator of blood sugar levels over the six to eight

This graph shows the national average HbA1c has fallen in the past few years:

This is good news and a credit to all the hard work that has been carried out to drive improvements in diabetes care in children and young people over the last 5 years.

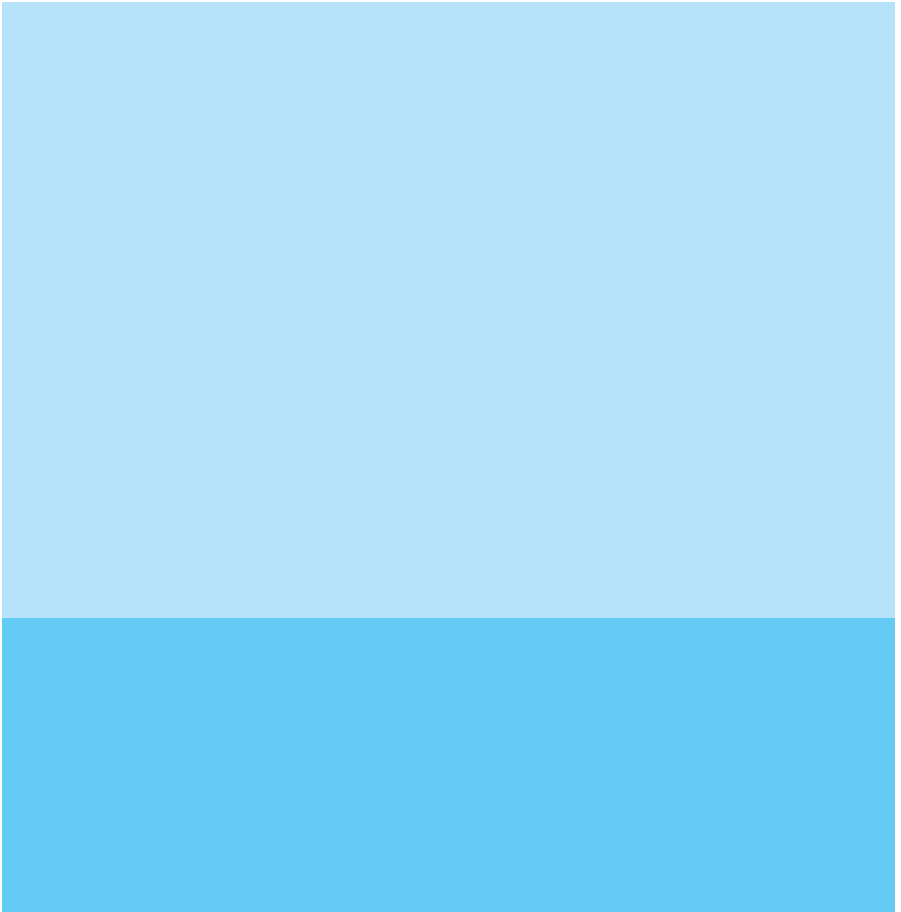
However, there were considerable differences across England and Wales with some clinics and networks achieving better diabetes control than others. Higher average HbA1C levels were found amongst older children, which could reflect challenges associated with self-management and adolescence. There was also an association between social deprivation and poorer diabetes control, with children and young people living in the most deprived areas having an average HbA1C of 73.7 mmol/mol compared to an average of 67.2 mmol/mol amongst children and young people with diabetes in the least deprived areas.

More information about these differences can be found in the main NPDA 2014-15 report or in the individual paediatric diabetes clinic reports, available on the NPDA website: [www.rcpch.ac.uk/npda](http://www.rcpch.ac.uk/npda).



High blood pressure

Found in 27.1% of young people  
with diabetes (12 years and over).



## Heart disease (cardiovascular) risk factors

People with diabetes are at risk of cardiovascular disease which can increase the risk of stroke and heart attack.

The NPDA investigated factors which increase the risk of cardiovascular disease including high blood pressure, being overweight or obese, high cholesterol, and smoking in young people aged 12 and above:

- ✦ Just over a third of those (34.9%) with Type 1 diabetes had high blood pressure
- ✦ 15.9% of 0-11 year-olds and 20.7% of those 12 years and over were obese
- ✦ Over 1 in 5 (27.1%) young people over 12 with Type 1 diabetes had raised cholesterol
- ✦ 4% of young people

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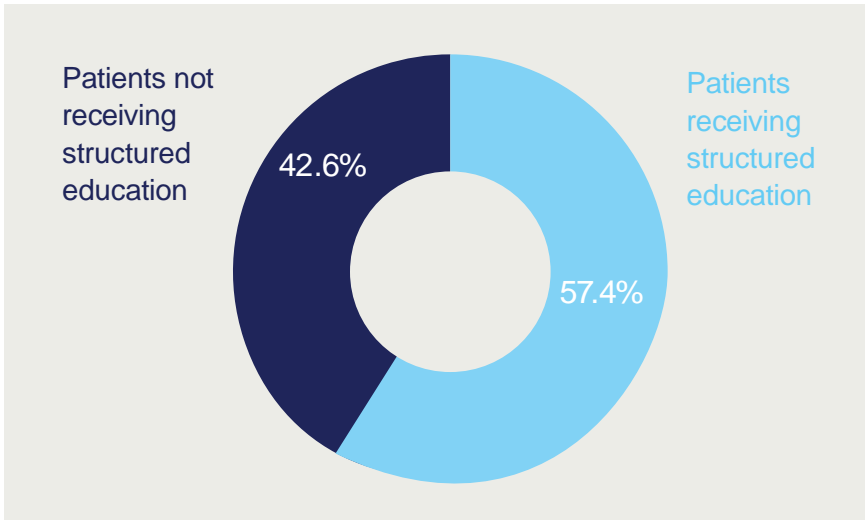
## Structured education

Managing diet, blood glucose levels and insulin requirements on a day to day basis is a challenging balancing act for children, young people and parents.

Structured Patient Education Programmes teach you or your child how to manage their diabetes, and should be offered on an ongoing basis from the point of diagnosis. They should be aimed at the age and maturity level of your child, and should meet the needs of the individual child and family.

Do ask your clinic for age-appropriate, structured education to support your child's management of their diabetes if you have not been offered it.

The NPDA found that almost 60% of the children and young people in the audit received some form of structured education in 2014-15, up from 55% in 2014.





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- ✦ There have been significant improvements in the care of children and young people with diabetes, as demonstrated by increased completion of health checks and improved national average HbA1c
  - ✦ Parents and carers of children and young people with diabetes who are over 12 years-old can talk to their diabetes clinics about receiving and discussing the results of the key healthcare checks on a yearly basis. These include: HbA1c, height and weight, blood pressure, urinary albumin, cholesterol, eye screening and foot examination.
  - ✦ Parents and carers should work with their diabetes team to achieve the best HbA1c level possible for their child. Together they should work on action plans to maintain good control of the diabetes for the child or young person.
  - ✦ Ongoing support for children and young people with diabetes is important. This should include structured educational packages, psychological assessment support, and blood glucose target setting to reduce the risk of long term complications.

## Further NPDA reading

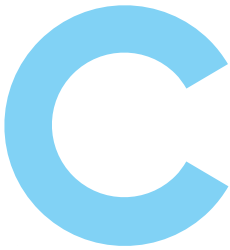
Please visit [www.rcpch.ac.uk/npda](http://www.rcpch.ac.uk/npda)



# other resources

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If you have questions about you or your child's care please speak to your GP, paediatrician or nurse.



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