

## National Paediatric Diabetes Audit 2014-15

Final summary results for Queen Elizabeth II , The Lister, East and North Hertfordshire NHS Trust (code PZ099) in the East of England region

**CONFIDENTIAL - NOT FOR ONWARD CIRCULATION UNTIL RELEASE OF NPDA 2014- 2015 NATIONAL REPORT**

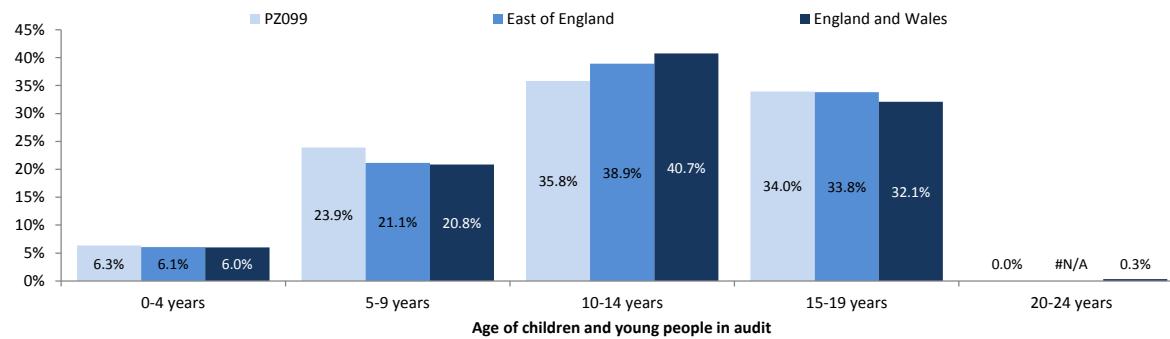
### 1. Introduction

Please note that the data provided in this report have been shared with participating units in advance of publication of the national report to assist the peer review process. In accordance with information governance rules any data based on a number less than five has been suppressed and is shown as '#N/A' in the charts below.

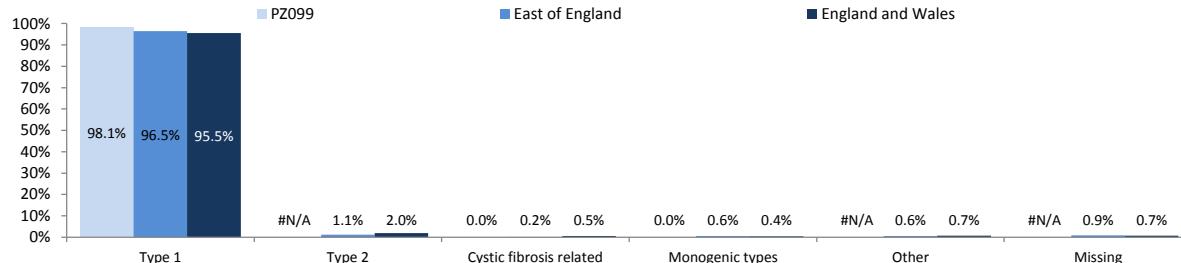
### 2. Clinic characteristics

A total of 268 children and young people (CYP) with diabetes who received treatment at Queen Elizabeth II , The Lister, East and North Hertfordshire NHS Trust were included in the 2014/15 audit. A small number of people for whom data was provided were not included in the audit as they did not meet the audit criteria or did not have the minimum demographic data required. The charts below show the age and type of diabetes distribution.

#### Age of children and young people included in the audit



#### Type of diabetes

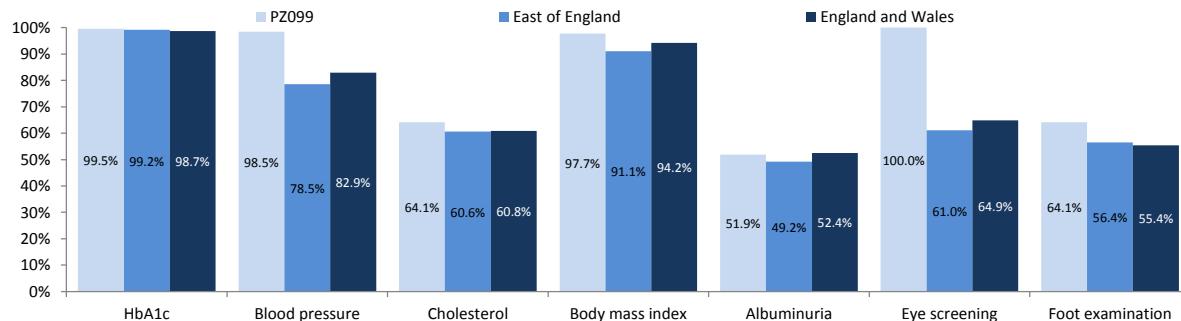


### 3. Completion of care processes

#### The seven key care processes

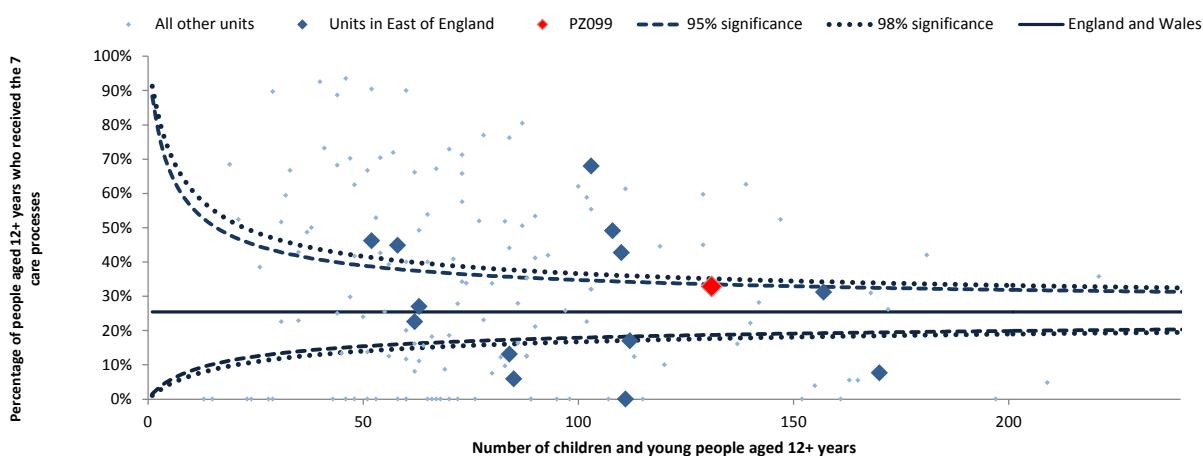
The NPDA collects data on the care processes recommended by NICE. All CYP with diabetes should have their HbA1c measured at least once a year and young people aged 12 years and older should have further tests to identify any early signs of complications. The criteria for inclusion in the denominator include having a complete year of care (ie not diagnosed, left the service or died within the audit period) and 12 years or older on the first day of the audit for care processes other than HbA1c which is for all ages. The denominator for the HbA1c care process is 216 and the denominator for the seven key care processes is 131.

#### Percentage of children and young people who received each of the seven key care process



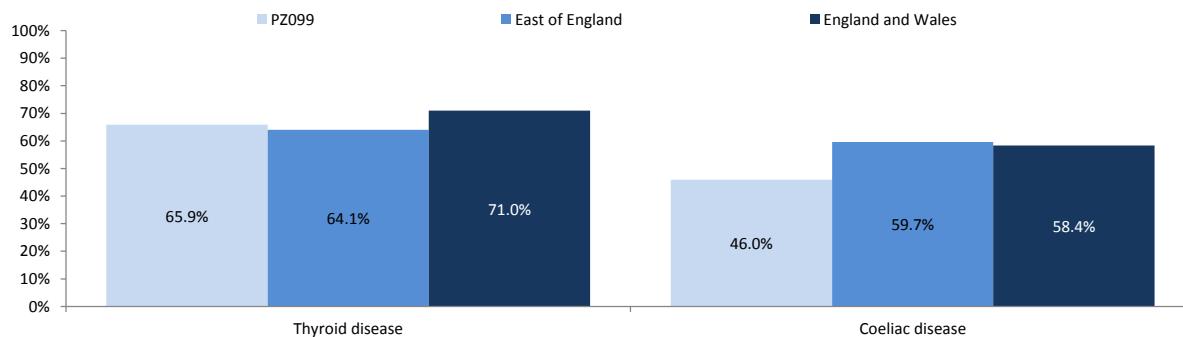
In unit PZ099 32.8% of young people aged 12 years and older had received all seven care processes between April 2014 and March 2015 compared to 25.4% across England and Wales. The completion rate for all seven key care processes for PZ099 is similar to the national figure for England and Wales.

#### Percentage of young people aged 12 years and older who received all seven care processes



It is also recommended that children and people with Type 1 diabetes are screened for thyroid and coeliac disease. The denominator for the data below is 211.

#### Percentage of children and young people with Type 1 diabetes who received screening



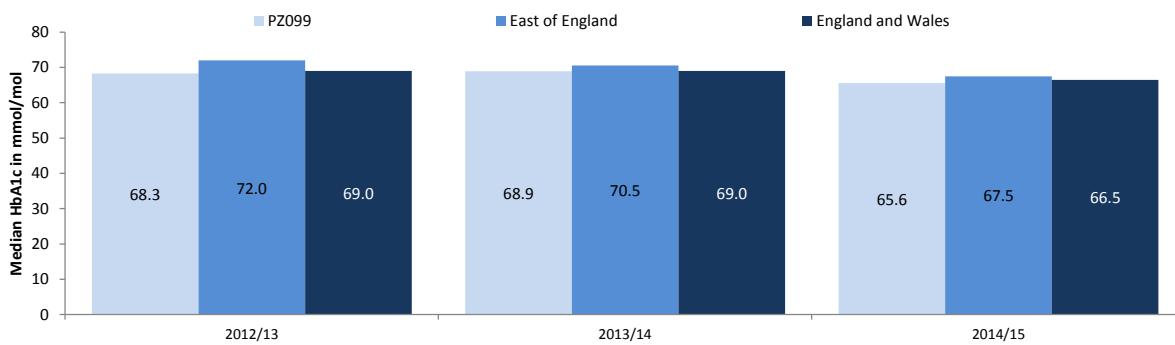
#### **4. Outcomes of care**

The collection of outcome measures is an important part of monitoring diabetes control and care. Treatment targets can be viewed as part of the process of care or as an 'intermediate outcome' i.e. an intermediary step between a care process of the patient and a 'hard' endpoint such as the development of a complication. This section not only covers HbA1c measurements which are recommended as the best indicator of long-term diabetes control, but also covers other indicators of microvascular disease and macrovascular risk factors.

##### **HbA1c**

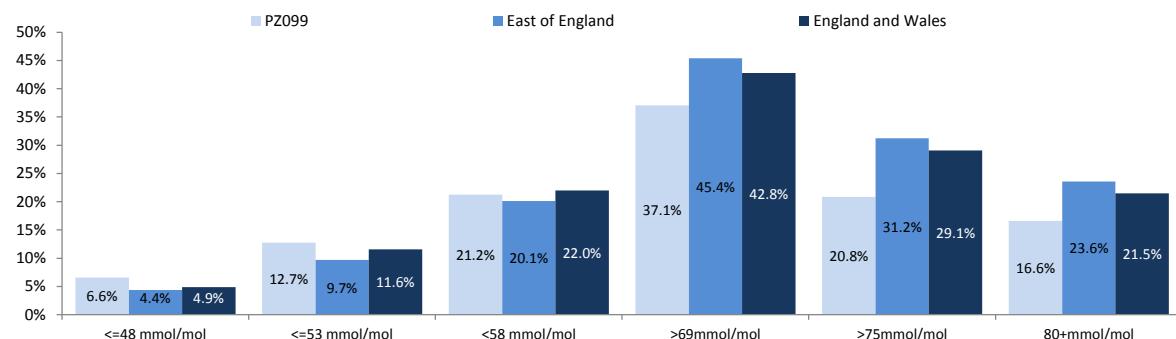
HbA1c is a measure of overall diabetes control and can be used as an intermediate outcome for people with diabetes. All the data presented below on HbA1c relates to the results for the 259 CYP with Type 1 diabetes and one or more valid HbA1c measurements in the audit period. This may be different from the number of CYP included in the data on HbA1c as a care process as it only includes those with Type 1 diabetes and includes those who have had a valid HbA1c at least 90 days after diagnosis irrespective of whether they left the service for any reason.

#### Median HbA1c for children and young people with Type 1 diabetes



Where historic HbA1c data has not been published for the unit or region #N/A will be shown on the above chart.

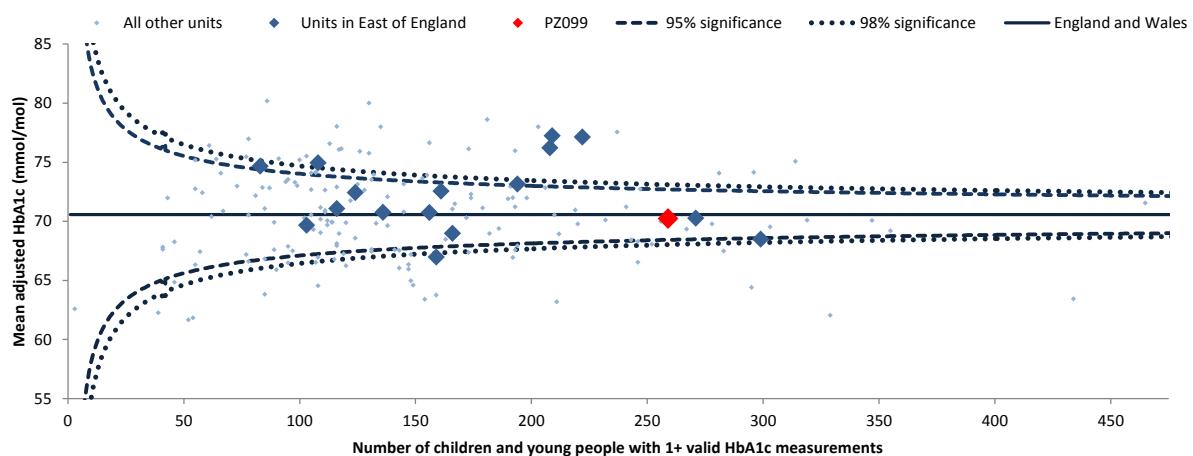
#### Percentage of children and young people with Type 1 diabetes meeting HbA1c targets



#### Adjusting HbA1c data for case mix or demographic characteristics of patients

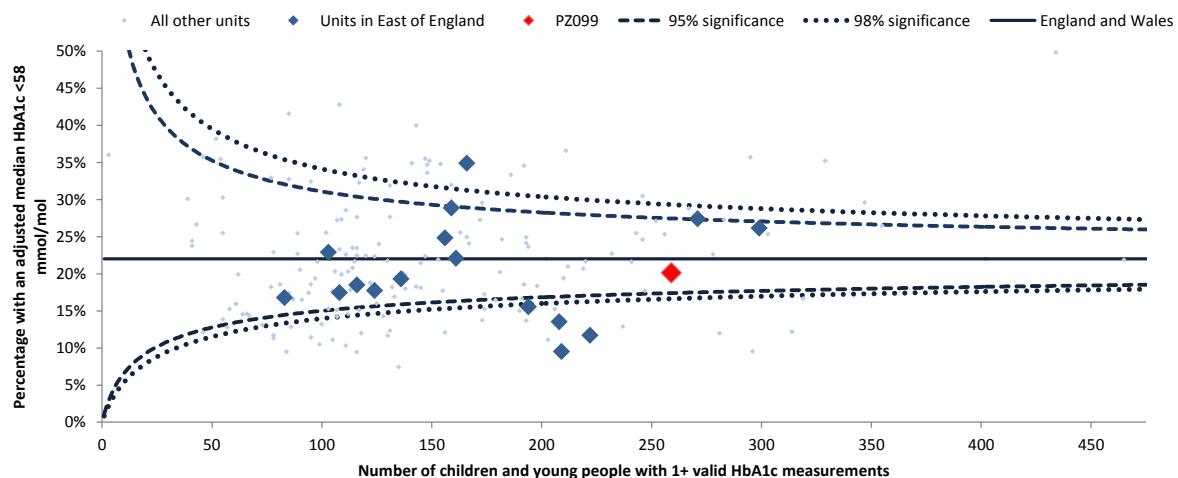
It has been shown that HbA1c varies with age, sex, duration of diabetes and social deprivation. Data on HbA1c can be adjusted to take account of the case-mix (demographic characteristics) of a unit. The adjusted data on HbA1c presented below has been adjusted for age, sex, duration of diabetes and social deprivation based on home postcode. This means that the variation between units can not be attributed to differences in the patient demographic characteristics.

#### Adjusted mean HbA1c



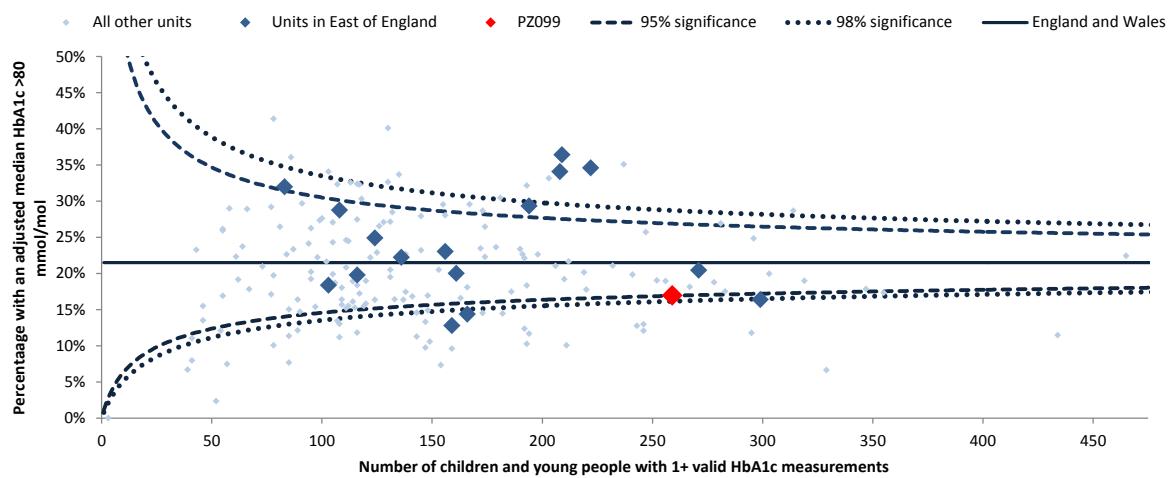
In unit PZ099 the adjusted mean HbA1c for children and young people with Type 1 diabetes was 70.2 mmol/mol compared to 70.6 mmol/mol across England and Wales. The adjusted mean HbA1c for PZ099 is similar to the national figure for England and Wales.

#### Adjusted percentage of children and young people with a HbA1c of less than 58 mmol/mol



The case-mix adjusted percentage of children and young people with Type 1 diabetes with a HbA1c of less than 58 mmol/mol in unit PZ099 was 20.1% compared to 22% across England and Wales. The adjusted percentage of patients with an HbA1c less than 58mmol/mol for PZ099 is similar to the national figure for England and Wales.

#### Adjusted percentage of children and young people with a HbA1c of more than 80 mmol/mol

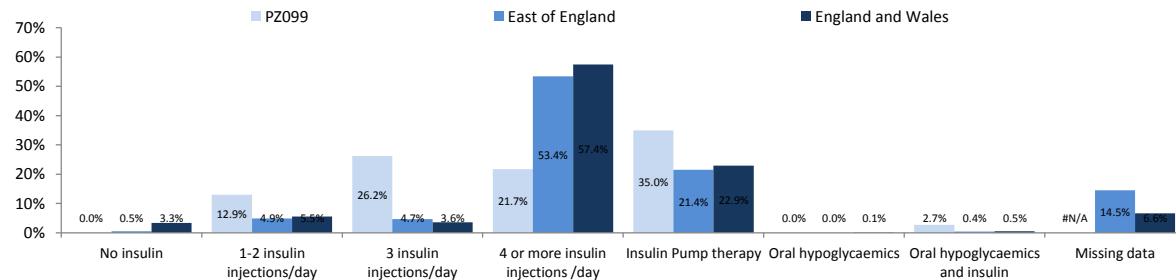


The case-mix adjusted percentage of children and young people with Type 1 diabetes with a HbA1c of more than 80 mmol/mol in unit PZ099 was 17% compared to 21.5% across England and Wales. The adjusted percentage of patients with an HbA1c more than 80 mmol/mol for PZ099 is similar to the national figure for England and Wales.

#### Treatment regime

Data is collected on the treatment regime and this is presented below. This includes 263 CYP with Type 1 diabetes.

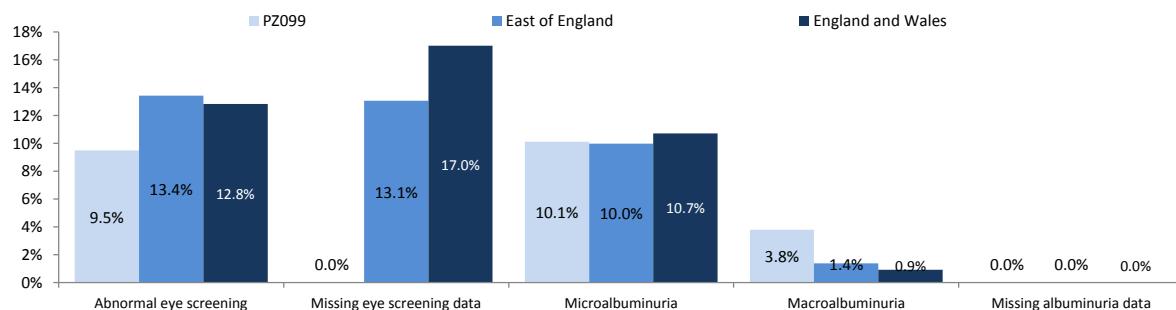
#### Treatment regime for people with Type 1 diabetes



#### Microvascular disease

People with diabetes are at increased risk of microvascular disease including retinopathy and kidney disease. The data below shows the results for young people aged 12 years and older where there was an indication that testing had taken place. Information is classed as missing if there is an indication that eye screening has taken place but the result of screening is not reported or if a numerical albuminuria value is provided without an indication of whether it was normal or abnormal. The denominator for eye disease is 158 and for albuminuria is 79. This means that 158 CYP had some indication of testing for eye disease and 79 CYP had testing for albuminuria.

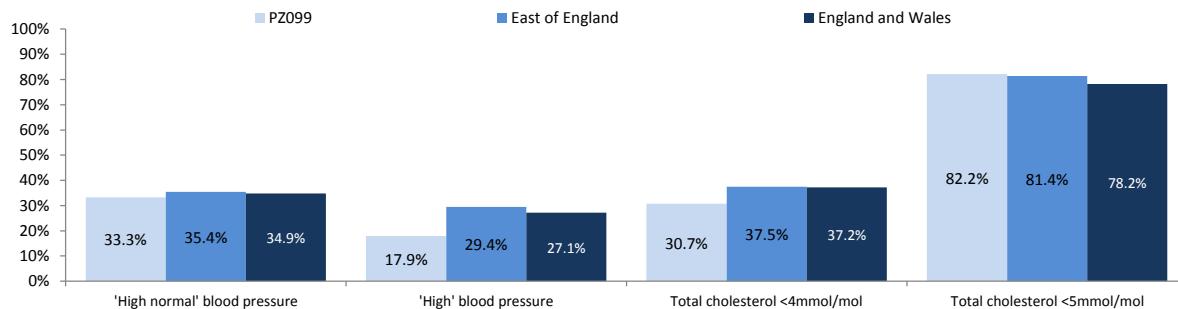
#### Percentage of people aged 12 years and older with microvascular disease



### Macrovascular disease risk factors

People with diabetes are at an increased risk of cardiovascular disease secondary to macrovascular risk factors including high blood pressure, abnormal lipid levels and high body mass index. The data below includes all young people aged 12 years and older where there is a valid blood pressure reading reported and where the results of a lipid profile are reported. The denominator for blood pressure is 156 and for lipids (cholesterol) is 101.

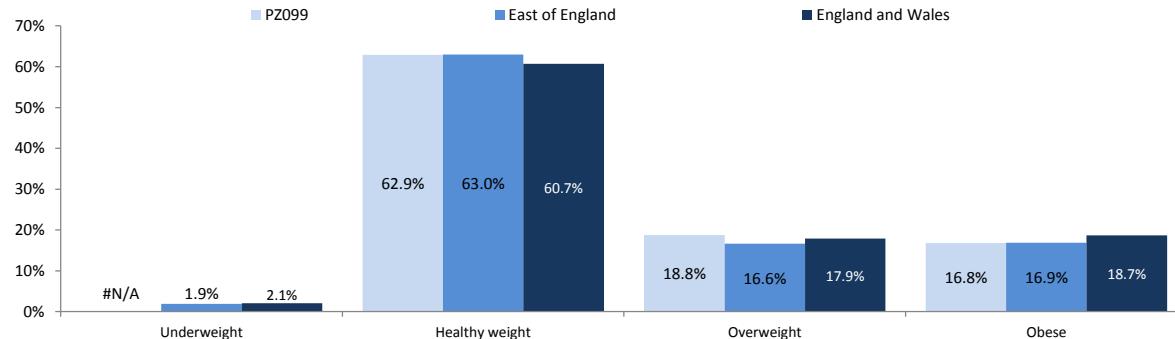
#### Blood pressure and cholesterol outcomes for young people aged 12 years and older



'High normal' blood pressure is defined as a systolic and/or a diastolic blood pressure between the 91st and 98th centile adjusted for age and sex. 'High' blood pressure is defined as a systolic and/or diastolic blood pressure above the 98th centile adjusted for age and sex.

Information on body mass index below relates to 256 CYP of all ages with Type 1 diabetes where a valid height and weight were measured on the same day.

#### Body mass index categories for CYP with Type 1 diabetes



Categories are calculated based on the UK 1990 reference population. Underweight is defined as under 5th centile, healthy weight as 5th-85th centile, overweight as 85th -95th centile and obese over 95th centile.

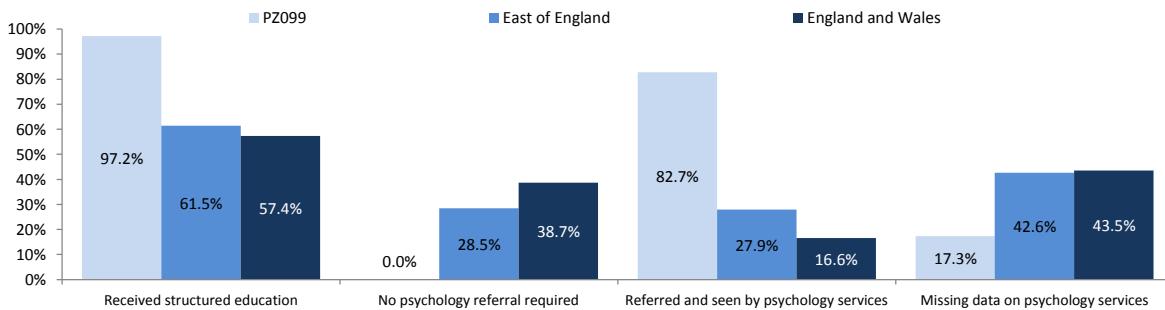
### 5. Access to structured education and CAMHS

Structured Patient Education Programmes are recommended by NICE as part of the ongoing management of children and young people with diabetes. The NPDA defined a structured education programme for paediatric diabetes as:

'A programme of self-management education, tailored to the child or young person's and their family's needs, both at the time of initial diagnosis and on an ongoing basis throughout the child's or young person's attendance at the paediatric diabetes service. This is a programme offered in addition to the education provided at routine outpatient consultations.'

Psychological assessment by multidisciplinary teams of children and young people's emotional and behavioural needs is recommended by NICE. Timely intervention is important to avoid co-morbidity from depression, eating disorders or drug taking. The denominator for this PDU for calculating structured education is 214.

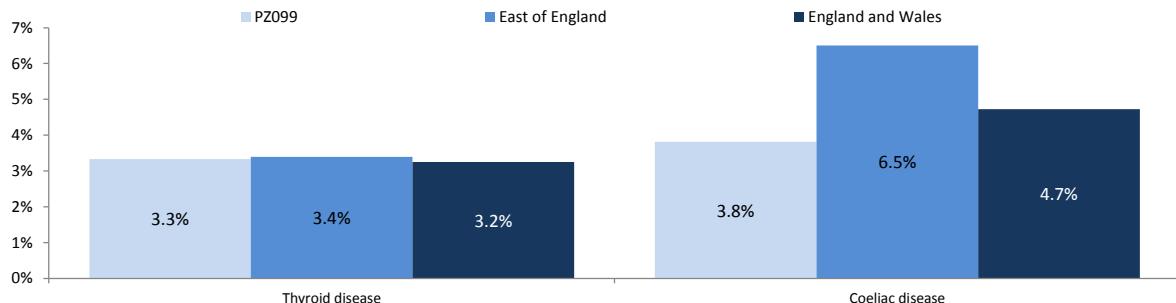
#### Percentage of people receiving structured education and psychological support



## 6. Thyroid and coeliac disease

Thyroid and coeliac disease screening for children and young people with Type 1 diabetes is important because the risk of developing such diseases is increased in those with a pre-existing autoimmune condition and there is a clear treatment pathway if these conditions are identified. The data presented below includes all CYP with Type 1 diabetes where the results of screening was provided. The denominator for this PDU for thyroid disease is 180 and for coeliac disease it is 131.

### Percentage of people with Type 1 diabetes with thyroid and coeliac disease



## 7. Conclusion

This PDU level report provides useful information for clinical staff, healthcare managers, commissioners, children and young people with diabetes and their families. It should be used in conjunction with data presented in the national report 2014-15 when published. Data should be scrutinised and utilised to drive up quality and standards of care. This can be achieved by benchmarking and adopting practices of care where high levels of performance have been found. Network working and quality assurance (peer review) are an integral part to achieving quality improvement.