

National Diabetes Audit

Key findings about the quality of care for children and young people with diabetes in England and Wales

Report for the audit period 2007-2008

Prepared in partnership with:



NHS Diabetes

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The Project Board for providing governance and strategic direction for the audit, the Paediatric Advisory Group for providing advice and guidance for the paediatric elements of the audit and the Paediatric Steering Group for its support and development of the paediatric analysis. Full details of membership can be found on the NDA website.

www.ic.nhs.uk/diabetesaudits

Justin Warner and Heather O'Connell at the Brecon Group Registry, for their efforts in developing Welsh paediatric participation in the audit and all those at the Welsh Assembly Government, who have worked towards developing participation in the audit from primary care.

Connecting for Health Systems and Service Delivery (CFHSSD - formerly NHSIA) for their support and development of the technical infrastructure for the audit, including Phil Moores, Julian Van Tienhoven, Bev Bowen and in particular Simon Netley and Darren Reddick for their support and encouragement to all those organisations participating in the audit throughout the data submission period.

The NDA User Group for their input and support of the audit. Full membership can be found on the NDA website.

The NDA has benefited from the support of staff throughout The NHS Information Centre (The IC). The project would like to thank them all, including the Geographic Demography and Population Statistics Team for designing the NDA participation Maps.

And finally, thanks to all those who have worked hard to encourage participation and submit data to the audit, including clinicians, managers, diabetes leads, clinical audit, service improvement and administrative staff. Their efforts and commitment have contributed to the ongoing development of the NDA.

Children and young people with diabetes: A call to action

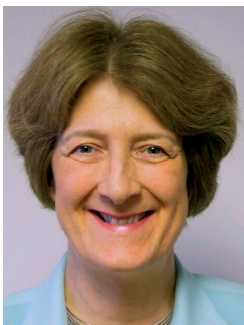
There are 23,000 children and young people with diabetes in England. They face a lifetime of diabetes - which is likely to be shorter than that of their peers. The care that they receive when young determines their future survival - how healthy they are, what they can do in life, whether they are well enough to enjoy their job, have a family, have fun.

Around the country, there are shining examples of good care. But overall, the picture is very worrying indeed. Nearly one in three children and young people have such a high HbA1c that they are almost certain to develop diabetic tissue damage. And 82% of children and young people have an HbA1c above the target set by the ground-breaking Diabetes Control and Complications Trial. Only a tiny percentage (4%) were receiving all the care processes recommended by NICE. All departments should be participating in audit, but insufficient are. High quality care is not optional – why is this not happening?

This disappointing situation cannot be allowed to continue. Action to prevent and manage acute and long-term complications of diabetes must start on day 1 of diagnosis and continue lifelong. NICE produced clear guidance 5 years ago, and more recently. Why has so little progress been made in implementing it?

Each person must receive care tailored to themselves and their family. Children and young people with diabetes require focused specialist diabetes care with sufficient multi-disciplinary team input to ensure vigorous and sustained effort to ensure safety and to mitigate risk factors for complications whilst maintaining happiness, growth and development, education, activities and job prospects.

Act now. The progression of diabetes is relentless. We have the knowledge. We need to use it and take responsibility and benchmark our efforts against others in order to improve further. Children and Young People deserve nothing less.



Rowan Hillson

Dr Rowan Hillson
National Clinical Director
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Sheila Shribman

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Foreword



This is the fifth report that has been produced for the National Diabetes Audit (NDA) analysing the data for children and young people with diabetes. It is encouraging that there has been an increase, albeit slight, in the number of submissions that have been received and it is also encouraging that, within

this, there has been an increase in the number of units that have been able to submit the full dataset. However, it should be possible to achieve near one hundred percent data submission. This is achieved in other European countries (including Wales) and there is no reason why it cannot be achieved in England.

There have been some slight improvements in the results that have come out of the audit. In particular there has been an increase in the number of children recorded as receiving all annual review processes and slight improvements in the results have been demonstrated. Whilst it cannot be certain that having an annual audit has been the sole reason for this it is nevertheless possible that it has made a contribution.

Nonetheless, these results compare very badly with those of many other European countries and, if we are going to do anything to improve the outcomes for children and young people who are still threatened with a significant

reduction in quality of life and of lifespan itself, it is going to be essential to take steps to initiate a quantum leap in improving the care that these children get. Whether this will involve changes in the quality of training given to those running diabetes units in order to provide the right level of education, a reduction in the number of units looking after children and an increase in the numbers of children attending each unit, establishment of regional networks or a change in treatment policy such as increasing the numbers of children treated by pump therapy is open to considerable debate.

It is to be hoped that the current trends in increasing numbers of submissions and the improvements in care outcomes that have been demonstrated will continue and that the quality of control obtained in children and young people will be maintained. To that end I would like to encourage everyone to continue to participate in the audit if you have already done so and to encourage those whom you are aware have not done so to 'come on board'.

A handwritten signature in black ink, appearing to read 'Jeremy Allgrove'.

Dr Jeremy Allgrove
Consultant Paediatric Endocrinologist
Chair, National Diabetes Audit Paediatric
Advisory Group



It is a pleasure once again to write this introduction to the Paediatric NDA on behalf of members of the Brecon Group (the all Wales Paediatric Diabetes interest group), who for this audit period (2007-2008) have excelled themselves once again with a 100 per cent participation rate from centres in Wales. My thanks go to all those

who have collected data and to Heather O'Connell who has tirelessly chased up centres to get every last registration. The success of the Brecon group as a Paediatric Diabetes network in Wales is quite clearly demonstrated by overwhelming enthusiasm to support the NDA. Despite success in registrations from Wales, the NDA has helped to uncover some rather worrying

differences between the two nations. Wales has greater proportions of children with HbA1c ≥ 7.5 per cent and 9.5 per cent and this will need addressing both at National and local levels. I hope centres in Wales and England will use the audit data in a positive manner to help them plan services for children with diabetes, and where a shortfall exists, design new initiatives to solve the problem.

A handwritten signature in black ink, appearing to read 'J. Warner'.

Dr Justin Warner
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Summary of Key Findings

- 13,021 records on children and young people with diabetes, from 105 paediatric units, were submitted to the 2007-2008 audit. This is a 2.31 per cent increase on the 12,727 records submitted to the previous audit year.
- Fewer than 2 per cent of children and young people are recorded with Type 2 diabetes with little variation over the 5 audit periods
- Over half (52 per cent) of the number of registrations for children and young people with diabetes are male
- 7.75 per cent of children and young people with diabetes experienced at least one episode of diabetic ketoacidosis (DKA) within the audit period.
- The prevalence of DKA is higher in females than males
- Over 80 per cent of children and young people of all ages registered with diabetes had an HbA1c measure within the audit period
- 96 per cent of children and young people were not recorded as receiving all the key processes of care recommended by the National Institute of Clinical Excellence (NICE) within the audit period
- In the previous audit 88.64 per cent of children and young people with diabetes in the Black and Asian ethnic group had an HbA1c measure recorded, since then this has reduced to 84.81 per cent
- 17.73 per cent of children and young people with diabetes, with an HbA1c measurement recorded, achieved the NICE recommended HbA1c target of < 7.5 per cent. This is a slight increase on the previous audit year (17.67 per cent).
- Nearly 30 per cent of children and young people have an HbA1c measure of > 9.5 per cent

Recommendations

- Those involved in the delivery of care for children and young people with diabetes should be encouraged to continue the year on year improvement in the collection and submission of audit data.
- Those involved in the delivery of care of children and young people with diabetes should use the outcomes of the National Diabetes Audit to benchmark themselves against other units and to use the information obtained to try to persuade commissioners of the need for adequate resourcing of services.
- All those involved in the commissioning and delivery of care for children and young people with diabetes should ensure that services are resourced and organised to provide appropriate support for those with diabetes and to recognise that achieving good control of diabetes during childhood and adolescence, whilst having resource implications in the short term, will have long term benefits both for the individuals concerned and for society in general.
- All those involved in the delivery of care should set the highest standards of outcomes, such as HbA1c <7.5 per cent, and aim for the highest possible percentage of all care processes.
- Lack of IT support in units which failed to submit data must be addressed to ensure that all centres can contribute to the audit.

Introduction

This is the fifth report for the National Diabetes Audit (NDA) presenting the main findings from the 2007-2008 paediatric audit.

The National Diabetes Audit (NDA) was commissioned by the Healthcare Commission. Commissioning and funding of this, and all other National Clinical Audit and Patient Outcomes Programme projects, passed to the Healthcare Quality Improvement Partnership in April 2008.

The audit is managed by the National Clinical Audit Support Programme (NCASP) and works in partnership with Diabetes UK with clinical and professional guidance from the NDA Project Board and Paediatric Advisory Group. Full membership lists can be found on the NDA website.

The Paediatric National Diabetes Audit covers four components of the National Service Framework (NSF)¹ for Diabetes:

1 Registrations

How many children and young people with diabetes are cared for in paediatric units?

2 Complications

What is the annual rate of ketoacidosis for children and young people registered with diabetes?

3 Care Processes

What proportions of children and young people with diabetes are getting the key processes of diabetes care?

4 Treatment Targets

What proportions of children and young people with diabetes achieve treatment targets?

The analysis within this report is based on voluntary submissions from specialist paediatric units caring for children and young people with diabetes in England and Wales.

This report is supplemented by the NDA online toolkit allowing in-depth unit level analysis and the paediatric data tables which can be downloaded from the NDA webpage at: www.ic.nhs.uk/diabetesaudits

Data collection within units is predominantly paper-based therefore information on the complete dataset is not always possible. This must be taken into consideration when viewing the results within this report, particularly information on care processes and treatment targets.

Participation

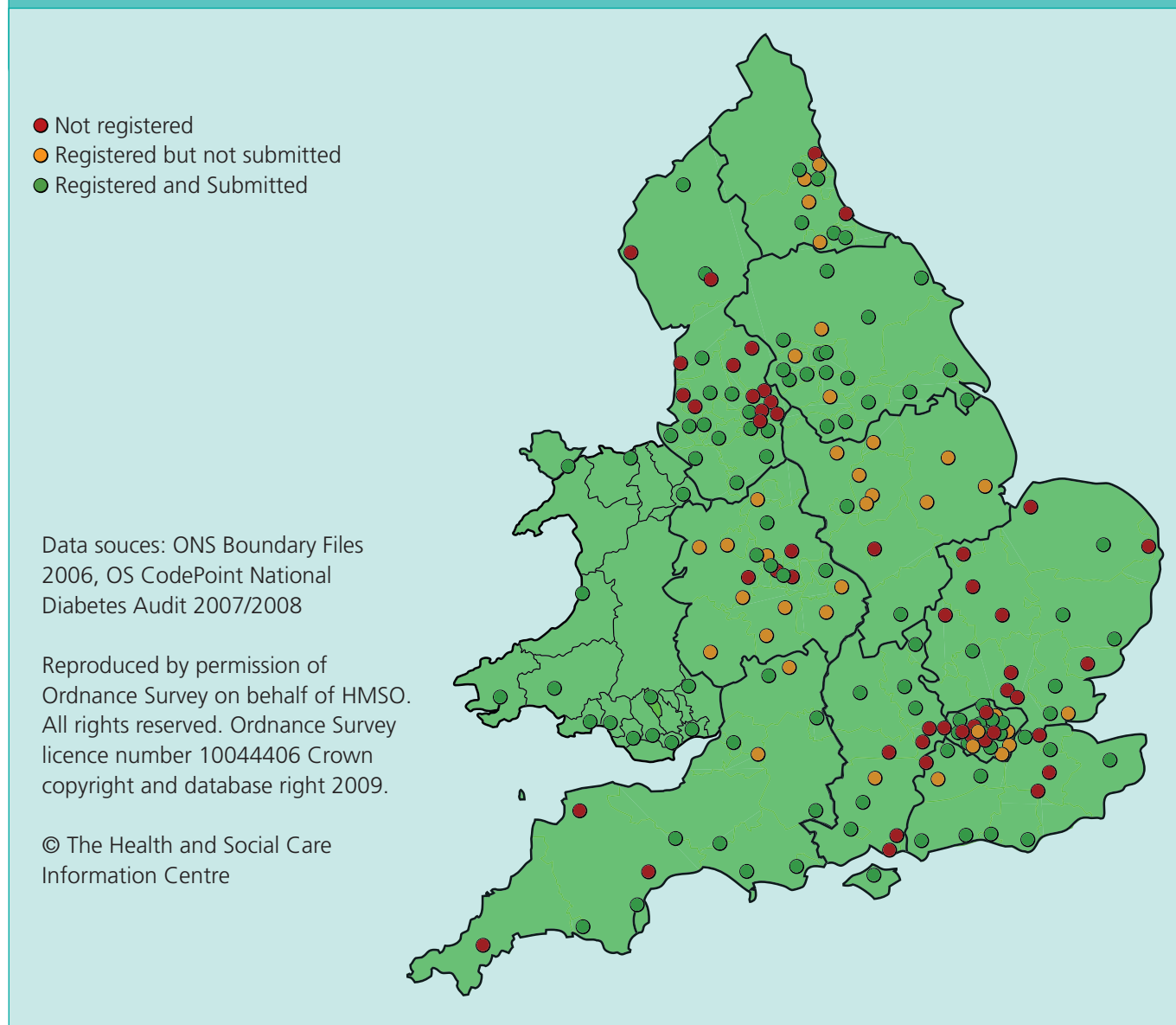
For the 2007-2008 audit period, 105 paediatric units in England and Wales successfully submitted data for children and young people with diabetes aged 0 to 24 years. This represents just under 40 per cent of the number of known units delivering diabetes care in England (91/251*) and 100 per cent of the units in Wales (14/14).

There is a huge variation in the number of records submitted to the audit by unit ranging from 419 to 4 with many records only containing demographic information. This is indicative of the variation in the size of diabetic caseloads for specialist paediatric units.

41 units are registered for the 2007-2008 audit however they did not manage to submit data to this audit period. Lack of time and resources are the main reasons units are unable to participate. This is supported by the recent survey conducted by the Royal College of Paediatric and Child Health (RCPCH) and the published report "Growing up with diabetes: children and young people with diabetes in England".

The full list of participating units is available on the NDA website at www.ic.nhs.uk/diabetesaudits

Figure 1: Paediatric unit participation 2007-2008 audit



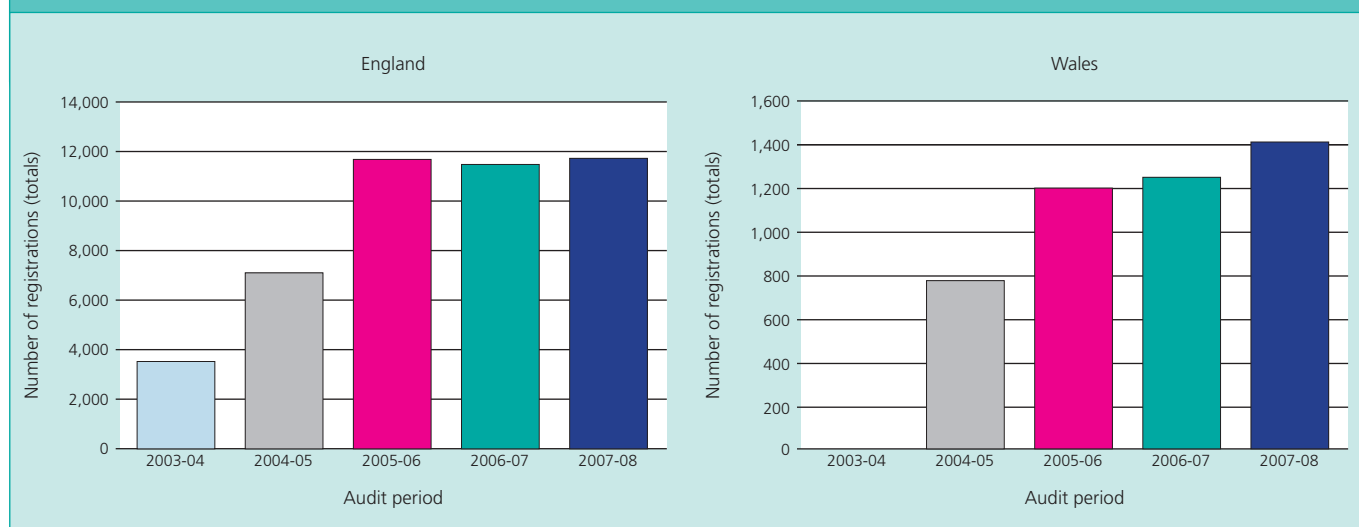
* Number of units in England delivering diabetes care for children and young people is based on the recent survey and report published in March 2009 by the Royal College of Paediatrics and Child Health (RCPCH).

Registrations

The 2007-2008 audit gained information on 13,021 children and young people (11,602 in England and 1,419 in Wales) with diabetes from 105 paediatric units in England and Wales. This is a 2.31 per cent

increase on the 12,727 records submitted to the previous audit year despite the slight decrease in the number of units participating (from 107 in 2006-2007 to 105 in 2007-2008).

Figure 2: Number of registrations (totals) by Country, over the five audit periods*



* Wales were unable to submit data to the 2003-2004 audit period

Registrations and diabetes type

99 per cent of records submitted to the audit had a diabetes type recorded. Of which, 97 per cent had Type 1 diabetes which is a 5 per cent increase compared to the previous audit year.

Fewer than 2 per cent of children and young people are recorded with Type 2 diabetes with little variation over the 5 audit periods (Figure 3).

Figure 3: Percentage of registrations by diabetes type and audit period

Diabetes type	Audit period				
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008
Type 1	93.8%	96.4%	93.3%	94.7%	96.8%
Type 2	1.8%	1.5%	1.5%	1.6%	1.6%
MODY	0.1%	0.1%	0.2%	0.2%	0.2%
Other specified	3.8%	1.6%	3.6%	3.1%	1.0%
Not specified	0.5%	0.4%	1.4%	0.5%	0.4%

Registrations and sex

As recorded in previous audit years, over half (52 per cent) of the number of registrations for children and young people with diabetes are Male.

There are proportionally more females (2.26 per cent) recorded with Type 2 diabetes than males (0.92 per cent). This trend can be seen across both England and Wales (Figure 4)

Figure 4: Percentage of registrations by sex and diabetes type, for England and Wales, 2007-2008 audit period

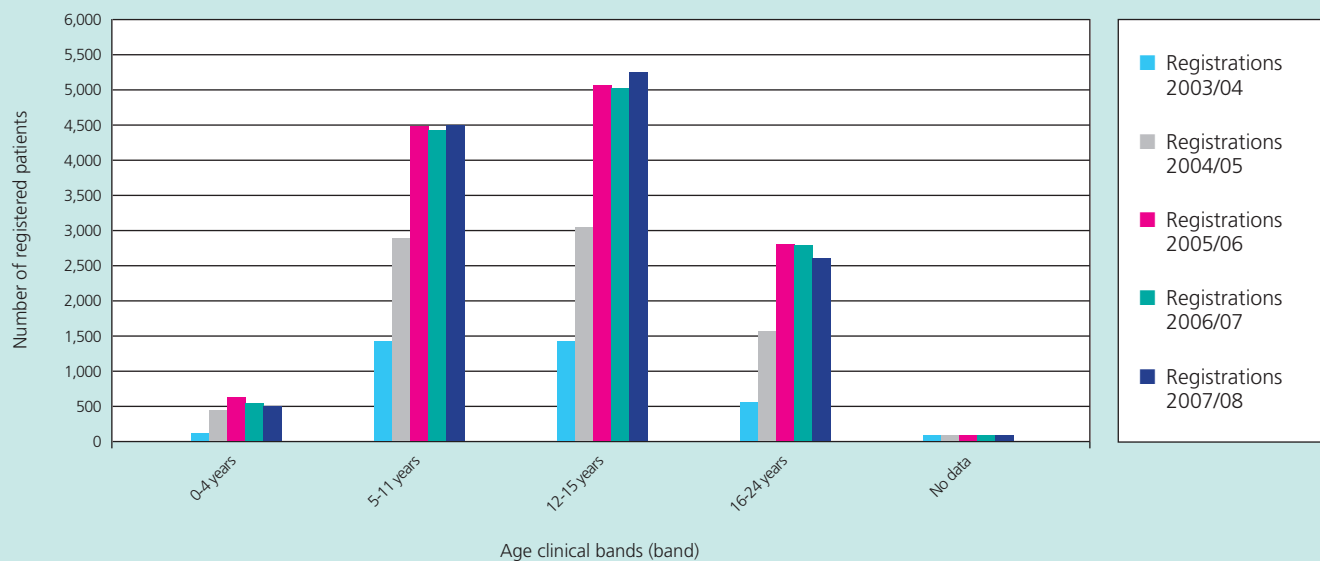
Diabetes Type	England		Wales	
	Male	Female	Male	Female
Type 1	97.82%	95.81%	97.50%	95.42%
Type 2	0.82%	2.22%	1.80%	2.58%
MODY	0.18%	0.27%	0.28%	0.14%
Other specified	0.85%	1.24%	0.42%	1.58%
Not specified	0.33%	0.47%	0.00%	0.29%

Registrations and age

40 per cent of the records submitted to the audit, from England and Wales, are for children and young people aged 12 to 15 years (Figure 5)

A decrease of 6 per cent in the number of records within the 0 to 4 year age band, compared to the previous audit period, can be seen.

Figure 5: Number of registrations (totals) by age band, for England and Wales combined, over the five audit periods



Analysis by country identifies opposing year-on-year trends within this age band (Figure 6).

Figure 6: Percentage difference in registrations for the 2006-2007 and 2007-2008 audit period, by age band and country

Age Band	England			Wales		
	Registrations 2006/7	Registrations 2007/8	Percentage Difference	Registrations 2006/7	Registrations 2007/8	Percentage Difference
0 - 4 yrs	488	447	-8.40%	53	59	11.32%
5 - 11 yrs	3,923	4,013	2.29%	459	489	6.54%
12 - 15 yrs	4,491	4,695	4.54%	538	550	2.23%
16 - 24 yrs	2,518	2,359	-6.31%	230	312	35.65%

Registrations and ethnicity

73 per cent of records submitted to the audit had an ethnic origin recorded, which is a slight decrease on the previous audit year (75 per cent), with variations in recording of ethnicity between England (70 per cent) and Wales (94 per cent).

For Wales 91.54 per cent of registrations are for the White ethnic group with just over 1 per cent within the Black and Minority Ethnic (BME) group (Figure 7)

For England 64.14 per cent of registrations are for the White ethnic group with 4.48 per cent within the Black and Minority Ethnic (BME) group (Figure 7).

When looking at diabetes and ethnicity at a national level there are proportionally more Black and Minority Ethnic (BME) children and young people with Type 2 diabetes than White children, although numbers are still small (Figure 8). This follows the same trend as previous audit years.

Figure 7: Percentage of registrations by ethnic group and country, for 2007-2008 audit period

Ethnic Group	Percentage of registrations		
	England	Wales	National
White	64.14%	91.54%	67.13%
Asian	3.16%	0.92%	2.92%
Black	1.32%	0.49%	1.23%
Other	1.98%	0.99%	1.87%
Not stated	29.40%	6.06%	26.86%

Figure 8: Percentage of children and young people with diabetes by diabetes type and ethnic group, for the 2007-2008 audit period

	Diabetes type	Ethnic Group				
		White	Asian	Black	Other	Not Stated
England	Type 1	97.61%	84.47%	90.85%	95.22%	96.89%
	Type 2	0.99%	8.72%	7.84%	2.17%	1.47%
	MODY	0.15%	0.27%	0.00%	1.30%	0.32%
	Other	0.82%	5.99%	1.31%	0.87%	0.97%
	Not Specified	0.43%	0.54%	0.00%	0.43%	0.35%
Wales	Type 1	96.84%	92.31%	85.71%	85.71%	94.19%
	Type 2	1.85%	7.69%	14.29%	7.14%	4.65%
	MODY	0.23%	0.00%	0.00%	0.00%	0.00%
	Other	0.92%	0.00%	0.00%	7.14%	1.16%
	Not Specified	0.15%	0.00%	0.00%	0.00%	0.00%
National	Type 1	97.49%	84.74%	90.63%	94.67%	96.83%
	Type 2	1.12%	8.68%	8.13%	2.46%	1.54%
	MODY	0.16%	0.26%	0.00%	1.23%	0.31%
	Other	0.84%	5.79%	1.25%	1.23%	0.97%
	Not Specified	0.39%	0.53%	0.00%	0.41%	0.34%

Diabetic Ketoacidosis (DKA) in children with diabetes

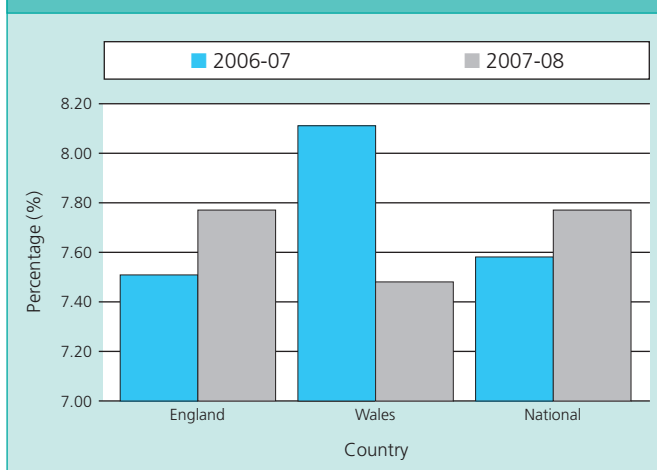
The data submitted to the NDA from paediatric units is supplemented by Diabetic Ketoacidosis (DKA) information from the Hospital Episodes Statistics (HES) database for England and Patient Episode Database for Wales (PEDW). This allows the audit to analyse rates of ketoacidosis in children and young people registered with diabetes.

Data from children and young people diagnosed with diabetes within the audit year have been excluded throughout this section of the report to ensure that ketoacidosis (DKA) at diagnosis is not included. This means that the rates might be slightly under-reported as some children may have had more than one episode in the year of diagnosis.

For the 2007-2008 audit 7.75 per cent of children and young people with diabetes experienced at least one episode of DKA within the audit period.

England follows the same trend with an increase in the rates of DKA, compared to the previous audit year, from 7.52 per cent to 7.78 per cent. However, the opposite can be seen for Wales with a decrease in the rates of DKA from 8.11 in 2006-2007 to 7.49 in 2007-2008 (Figure 9).

Figure 9: Prevalence percentage of DKA, by country, for the 2006-2007 and 2007-2008 audit period, HES and PEDW 1 year



The prevalence of DKA is higher in females than males for both England and Wales (Figure 10).

Figure 10: Prevalence percentage of DKA, by sex and country, for HES and PEDW 1 year, 2007-2008 audit period

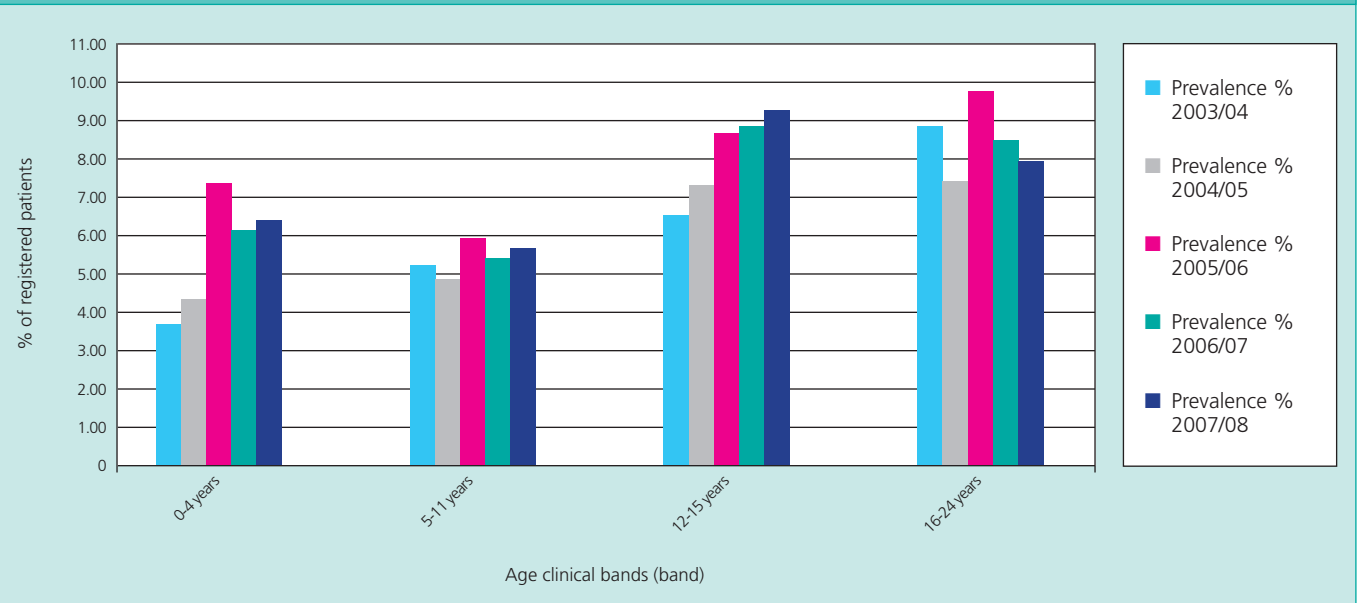
Country	Male	Female
England	6.38	9.26
Wales	5.42	9.69
National	6.27	9.31

The gap between males and females widens for those aged 16 to 24 (Figure 11)

Figure 11: Prevalence percentage of DKA, by sex and age band for England and Wales combined, for HES and PEDW 1 year, 2007-2008 audit period

Age band	Male	Female
Under 16 years	6.36	9.03
16 - 24 years	5.96	10.14
Total	6.27	9.31

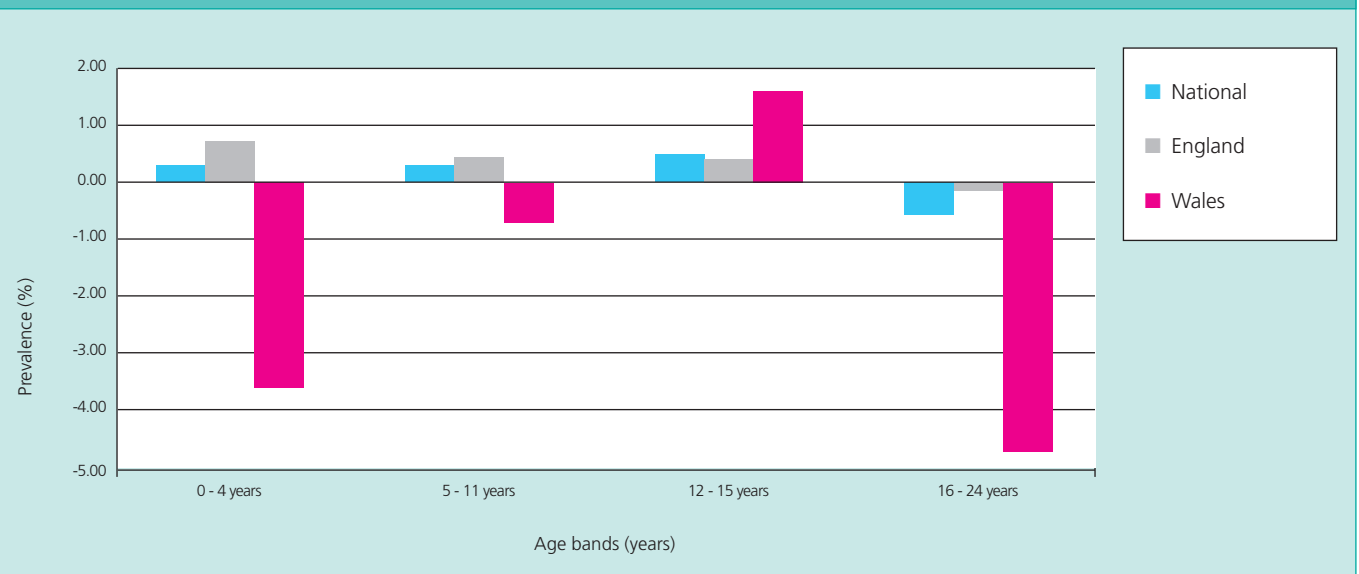
Figure 12: Prevalence percentage of DKA, by age band for England and Wales combined, for HES and PEDW 1 year, over the five audit periods



The prevalence of DKA is highest in the 12 – 15 year age band with a slight increase compared to the previous year from 8.86 per cent to 9.31 per cent.

A decrease in prevalence, compared to the previous year, for children and young people aged 16 -24 is shown (Figure 13) with the greatest decrease of 4.70 per cent in Wales.

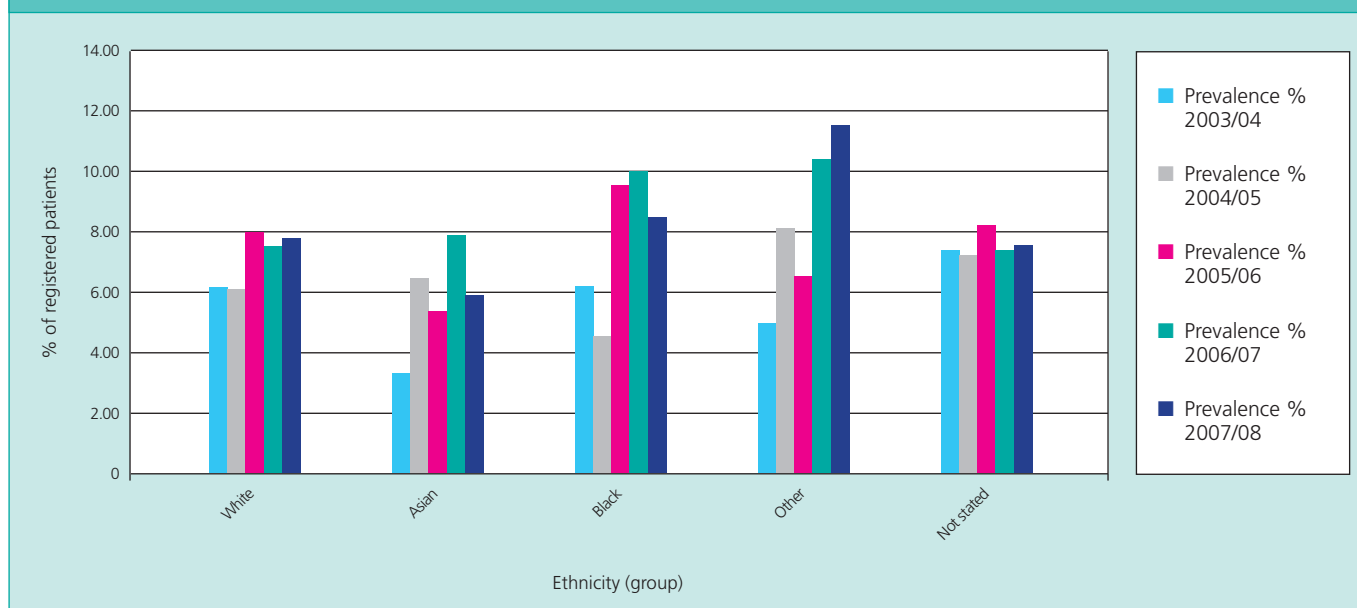
Figure 13: Difference in prevalence of DKA between 2006-2007 and 2007-2008 audit periods, by age and country, for HES and PEDW 1 year



Analysis by ethnicity shows the highest prevalence of DKA in the Other ethnic group (11.52 per cent) which follows the same trend as the previous audit period.

There are significant decreases in the prevalence of DKA, compared to the previous audit year, for the Asian (2.06 per cent decrease) and Black (1.37 per cent decrease) ethnic groups. It must be noted that this finding is reflected in England only as over 90 per cent of registrations in Wales were for the White ethnic group.

Figure 14: Prevalence percentage of DKA, by ethnic group for England and Wales combined, for HES and PEDW 1 year, over the five audit periods



Care Processes

The NDA collects information on the key care processes, recommended by the National Institute for Clinical Excellence (NICE)², for children and young people with diabetes.

The audit measures the proportion of children and young people with diabetes who are receiving the key processes of diabetes care which include:

- HbA1c
- Body Mass Index (BMI)
- Blood pressure
- Albumin
- Creatinine
- Cholesterol
- Eye exam
- Foot exam

Improved diabetes management and control in children and young people can reduce the impact of the long term complications of diabetes. However not all the care processes are recommended for children of all ages, as guidelines specify age 12 for starting

most care processes. Therefore the NDA provides analysis in this section for children and young people appropriate to their age.

Due to the limitations specialist paediatric units face when trying to submit complete data sets to the audit, care should be taken with the interpretation of care process analysis. Low results may be an indicator of the absence of data rather than an indicator of practice.

Care process information by individual unit can be found on the NDA website at:

www.ic.nhs.uk/diabetesaudits

For the 2007-2008 audit 31 paediatric units in England and Wales (29.52 per cent of participating units) submitted data on "all care processes" which is an increase on the previous audit year (25.50 per cent).

Only 4 per cent of the records submitted to the audit had "all care processes" carried out. This means that 96 per cent of children and young people with diabetes in the 2007-2008 audit may not have received all the care processes recommended by NICE. This remains at a low level (95 per cent) when looking at children over 12 years of age (Figure 15).

Figure 15: Percentage of children and young people over 12 years of age having key care processes recorded, over the five audit periods

	Care Process % 2003/4	Care Process % 2004/5	Care Process % 2005/6	Care Process % 2006/7	Care Process % 2007/8
HbA1c	67.71	73.16	77.56	84.67	89.09
BMI	47.98	50.50	52.99	60.46	73.22
Blood Pressure	46.30	44.05	40.58	53.26	60.05
Albumin	21.56	18.71	23.29	30.31	34.09
Creatinine	26.11	20.07	20.64	26.77	33.74
Cholesterol	21.51	18.17	17.49	22.55	32.03
Eye Exam	13.69	17.71	15.26	25.16	25.67
Foot Exam	13.95	17.37	15.39	21.33	23.47
All Care Processes	0.61	1.95	2.64	3.55	5.00

A substantial rise in the percentage of children and young people over 12 years of age having blood pressure, creatinine and cholesterol checks recorded has been noted when compared to the previous audit year results.

HbA1c analysis

The following section examines the number of children and young people, of all ages, having their HbA1c checked and recorded. It must be noted that due to units using different methods of data collection and submission there are variations in the HbA1c value recorded for patients. The NDA advises units to submit the latest record of HbA1c within the audit period however some units may potentially submit an overview of each patients HbA1c value for the year. Therefore care must be taken when comparing results by unit.

HbA1c is the most highly recorded care process. 88.43 per cent of children and young people of all ages with diabetes had their HbA1c recorded within

the audit period. This is an increase on the previous audit year (85.41 per cent) and continues the year-on-year improvement.

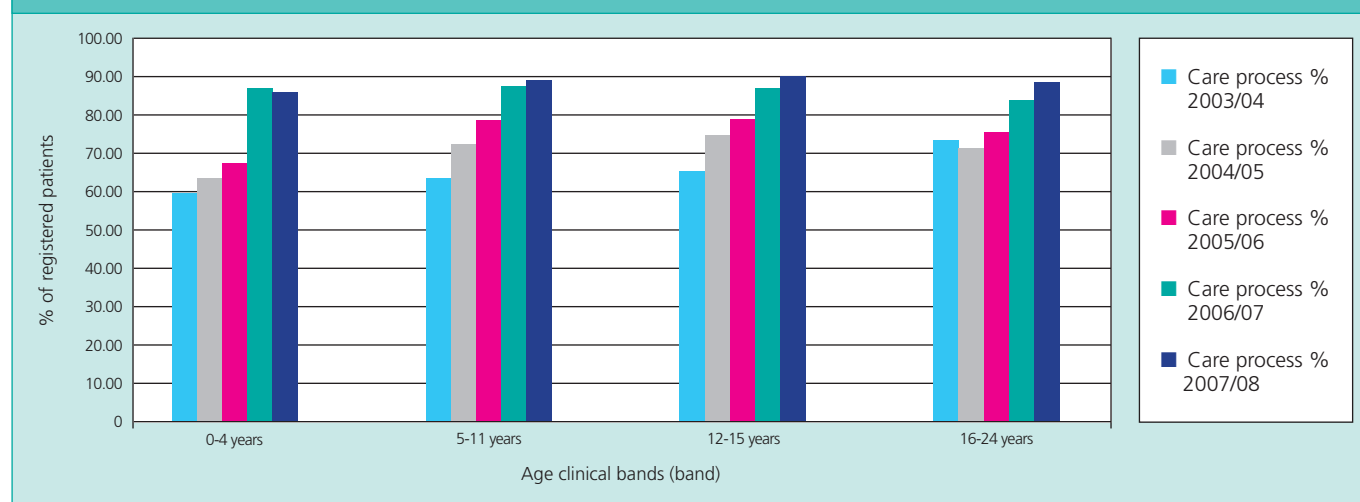
Of the 13,021 records submitted by paediatric units 11,422 had an HbA1c value present (87.72 per cent) which is an increase on the previous audit year (83.95 per cent). For England this is 87.95 per cent (10,204 children and young people) and for Wales this is 85.84 per cent (1,218 children and young people).

HbA1c information by unit can be downloaded from the NDA website at:

www.ic.nhs.uk/diabetesaudits

The highest percentage of children and young people having an HbA1c recorded in the audit period is in the 12 – 15 year age band (89.95 per cent) with the lowest in the 0 – 4 year age band (84.98 per cent) which follows the same trend as previous audit years (Figure 16)

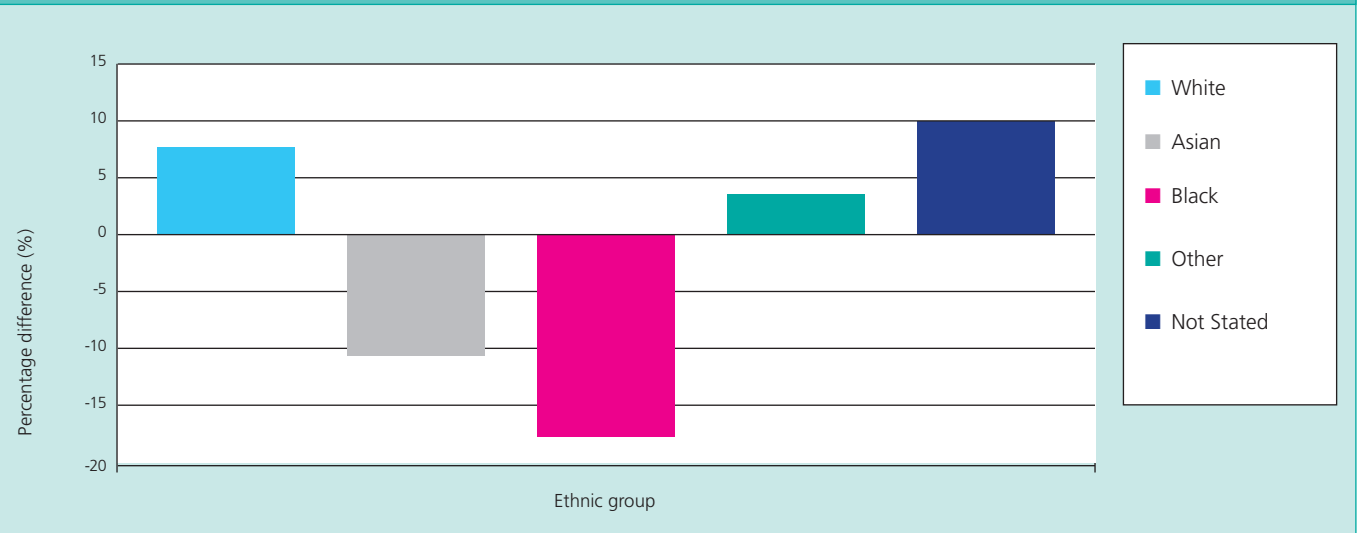
Figure 16: Percentage of children and young people having the HbA1c care process carried out by age band, over the five audit periods



When analysing HbA1c and ethnicity, the highest percentage (89.66 per cent) of children and young people with an HbA1c recording is within the White ethnic group with the lowest (78.75 per cent) in the Black ethnic group.

Compared to the previous audit year, a significant reduction in the percentage of children and young people having their HbA1c measured in the Black (17 per cent decrease in records) and Asian (11 per cent decrease in records) ethnic groups is highlighted (Figure 17).

Figure 17: Percentage difference between the 2006-2007 and 2007-2008 audit period in the number of children and young people having their HbA1c measured, by ethnic group



Treatment Targets

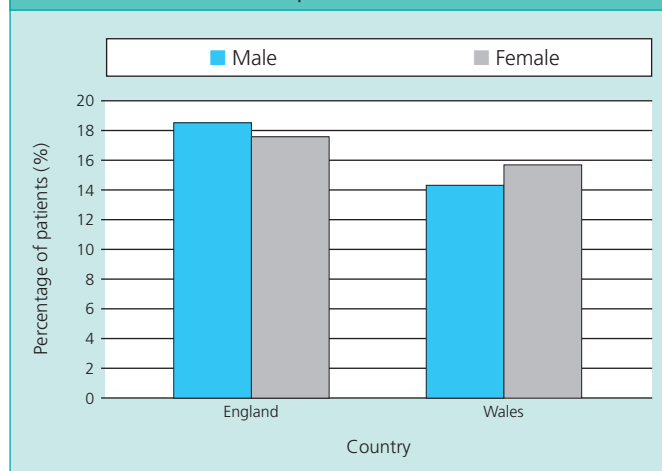
The NDA examines HbA1c and cholesterol results for children and young people with diabetes. Where an HbA1c and cholesterol value has been recorded analysis against the recommended NICE guidelines has been carried out. Records without an HbA1c or cholesterol value have been excluded from the following analysis.

HbA1c

17.73 per cent of children and young people with diabetes, with an HbA1c measurement recorded, achieved the NICE recommended HbA1c target of < 7.5 per cent. This is a slight increase on the previous audit year (17.67 per cent).

More males (18.01 per cent) than females (17.39 per cent) achieve the NICE recommended HbA1c target of < 7.5 per cent. When analysis by country is conducted the opposite effect can be seen for Wales (Figure 18).

Figure 18: Percentage of patients achieving the NICE recommended HbA1c target of < 7.5 per cent, by sex and country, for the 2007-2008 audit period



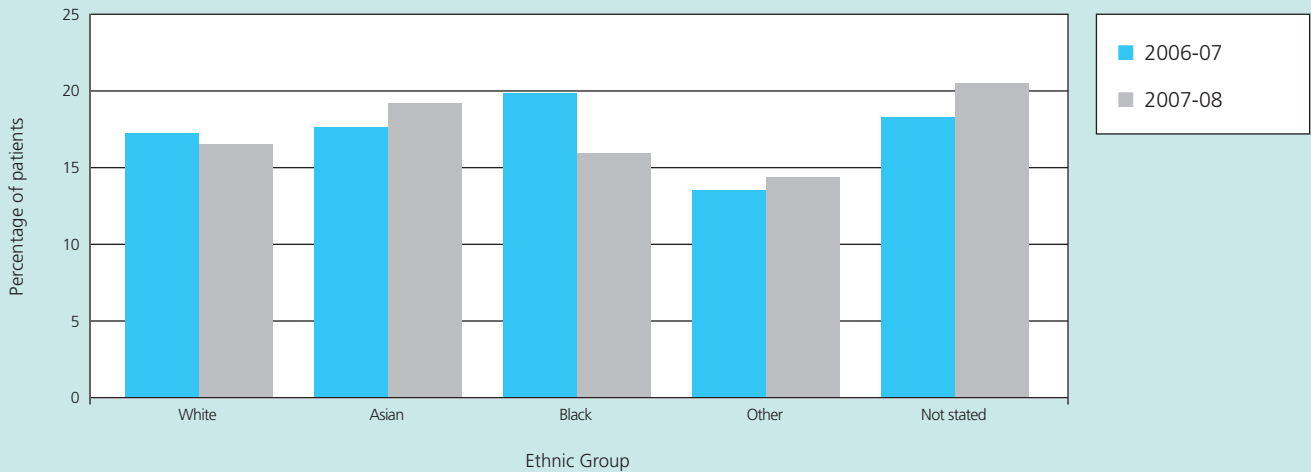
The achievement of the HbA1c < 7.5 per cent target is highest in the lower age bands of 0 -4 and 5 – 11 years. Variations between England and Wales by age band can be seen (Figure 19).

Figure 19: Percentage of patients achieving the HbA1c target of < 7.5 per cent, by age and country, for the 2007-2008 audit period

Age band	Country	
	England	Wales
0 - 4 yrs	19.31	29.79
5 - 11 yrs	18.88	14.70
12 - 15 yrs	17.25	13.96
16 - 24 yrs	17.69	14.93
National Value	17.67	17.67

For the 2007-2008 audit period the highest percentage of records achieving the HbA1c < 7.5 per cent target is within the Asian ethnic group (19.28 per cent). This is a change in trend from the previous audit year where the highest percentage of records was within the Black ethnic group (Figure 20).

Figure 20: Percentage of patients with an HbA1c value of < 7.5 per cent, by ethnic group for the 2006-2007 and 2007-2008 audit periods



Over half (53.23 per cent) of children and young people with an HbA1c value recorded are within the HbA1c banding of ≥ 7.5 per cent and ≤ 9.5 per cent. This follows the same trend as previous audit years.

Slight variations in the percentages within the HbA1c bands between England and Wales are shown. Particular differences are within the ≤ 6.5 per cent, ≥ 7.5 and ≤ 9.5 and > 9.5 HbA1c bands (Figure 21 and 22)

Figure 21: Percentage of patients with an HbA1c measure by HbA1c banding for England and Wales, for the 2007-2008 audit period.

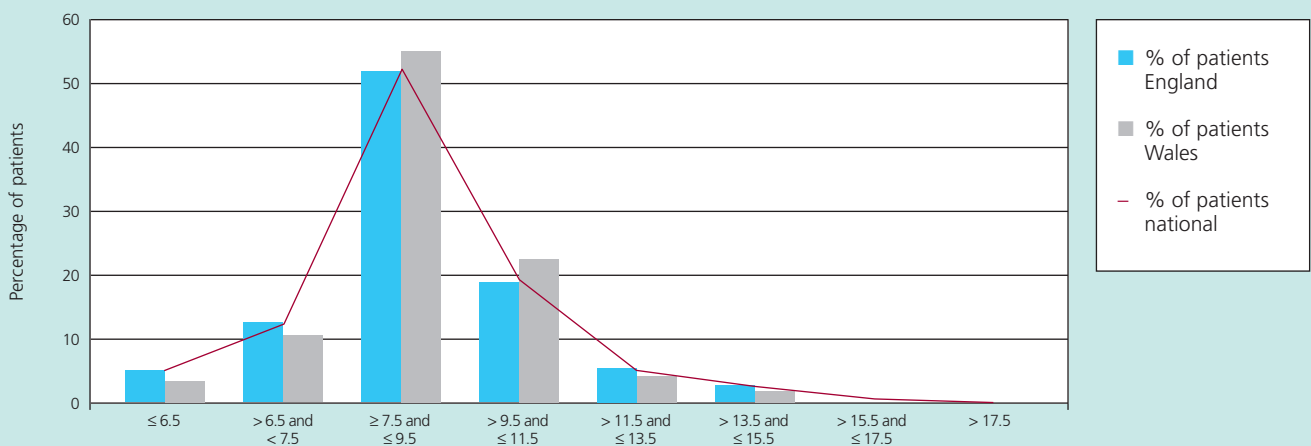


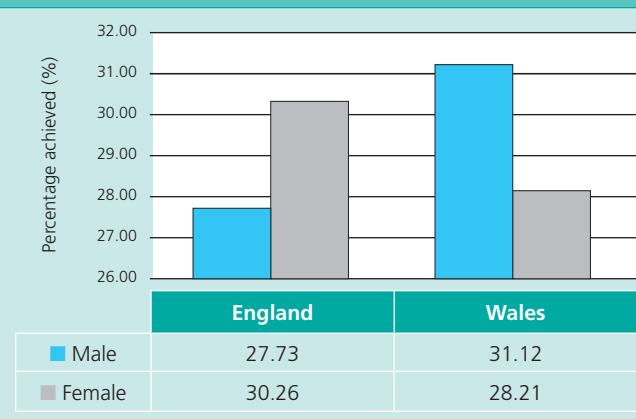
Figure 22: Percentage of patients with an HbA1c measure by HbA1c banding for England and Wales, for the 2007-2008 audit period.

HbA1c Value	Percentage of patients		
	National	England	Wales
≤ 6.5	5.02	5.15	3.94
> 6.5 and < 7.5	12.72	12.92	11.00
≥ 7.5 and ≤ 9.5	53.24	53.00	55.25
> 9.5 and ≤ 11.5	19.87	19.61	22.09
> 11.5 and ≤ 13.5	6.05	6.09	5.50
> 13.5 and ≤ 15.5	2.85	2.98	1.97
> 15.5 and ≤ 17.5	0.18	0.18	0.16
> 17.5	0.07	0.07	0.08

Nearly 30 per cent of children and young people have an HbA1c measurement of > 9.5 per cent for both England and Wales.

In England a higher percentage of females (30.26 per cent) than males (27.73) have an HbA1c of > 9.5 per cent. For Wales the opposite can be seen (Figure 23).

Figure 23: Percentage of patients with an HbA1c >9.5 per cent, by country, for the 2007-2008 audit period



The highest percentage of children and young people with an HbA1c measurement of > 9.5 per cent are aged 12 years and above.

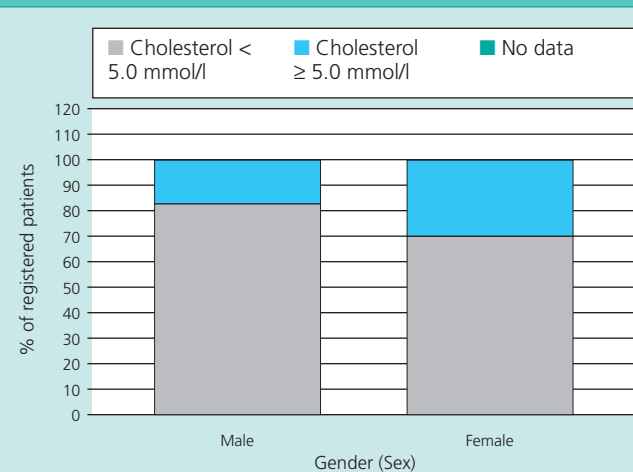
Cholesterol (children and young people aged 12 and above)

2,307 children and young people over the age of 12 had their cholesterol measured and recorded within the

audit period. Of which, 77 per cent achieved the NICE recommended cholesterol target of < 5.0 mmol/l.

There is a higher percentage of males (83.49 per cent) than females (70.12 per cent) achieving the NICE cholesterol target of < 5.0 mmol/l (Figure 24) which follows the same trend as previous audit years.

Figure 24: Percentage of children and young people over 12 years of age achieving the NICE cholesterol target of < 5.0 mmol/l, for England and Wales combined, for the 2007-2008 audit period



23 per cent of children and young people over 12 years of age have a cholesterol measurement of ≥ 5.0 mmol/l with the highest proportion of records within the Asian ethnic group. This follows the same trend as the previous audit year.

Figure 25: Percentage of children and young people ≥12 years of age by ethnic group, for the NICE cholesterol targets, for England and Wales combined for the 2007-2008 audit period

Ethnicity	NICE cholesterol target	
	< 5.0 mmol/l	≥ 5.0 mmol/l
White	77.62	22.38
Asian	62.37	37.63
Black	90.24	9.76
Other	81.25	18.75
Not stated	75.87	24.13

Conclusion

From the findings highlighted in this report it is clear that despite the ongoing challenges for specialist paediatric units small improvements in care continue. Particular improvements are highlighted in the percentage of children and young people with diabetes receiving the key processes of care. This ultimately aids in the management and control of diabetes and can reduce the impact of long term complications.

However, HbA1c targets are still not met in the majority of children with diabetes in England and Wales. New approaches to management need to be encouraged, that allow diabetes teams the resources to enable them to support children, young people and their families in more intensive management of their diabetes. Units should be encouraged to submit data for analysis and submission should be made an essential quality indicator for diabetes services.

However, the lack of resources and IT systems within specialist paediatric units severely hinders the collection and submission of data to the audit.

References

1. Department of Health (2001), National Service Framework for Diabetes: Standards
2. NHS National Institute for Clinical Excellence (NICE) (2004), Clinical Guideline 15, developed by the National Collaborating Centre for Women's and Children's Health and the National Collaborating Centre for Chronic Conditions: Type 1 diabetes: diagnosis and management of type 1 diabetes in children, young people and adults
3. National Service Framework for Diabetes (Wales) <http://www.wales.nhs.uk/sites3/home.cfm?orgid=440>
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National Diabetes Audit

Key findings about the quality of care for children and young people with diabetes in England and Wales

Report for the audit period 2007-2008

This NDA children and young peoples report presents the key findings from the fifth year of the National Diabetes Audit (NDA). It provides recommendations for paediatric units based on the analysis of the audit data.

This report is supported by data tables containing paediatric unit level results for the 2007-2008 audit period for both England and Wales. The data tables can be downloaded from the NDA webpage at:

www.ic.nhs.uk/diabetesaudits

For further information about this report or the data tables, please contact The NHS Information Centre's Contact Centre on 0845 300 6016 or email enquiries@ic.nhs.uk quoting reference number IC 10060209

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