

National Diabetes Audit

Executive Summary

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

Report for the audit period 2007-2008

Prepared in partnership with:



NHS Diabetes

Executive Summary

This is the fifth annual report of the National Diabetes Audit (NDA) presenting the key findings from 2007-2008. The NDA collects data from both primary and secondary care sectors, including specialist paediatric units providing care for children and young people with diabetes.

The National Diabetes Audit (NDA) was commissioned and sponsored by the Healthcare Commission. Commissioning of this, and other National Clinical Audit and Patient Outcomes Programme projects, transferred to the Healthcare Quality Improvement Partnership (HQIP) from 1st April 2008.

The NDA covers four components of the National Service Framework (NSF) for Diabetes:

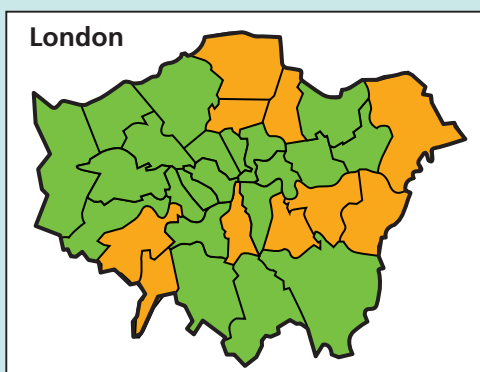
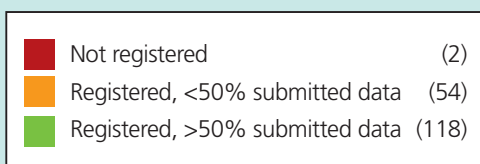
1. Registrations: Is everyone with diabetes diagnosed and recorded on a practice diabetes register?

2. Complications: For people with diabetes what is the annual rate of specific complications?

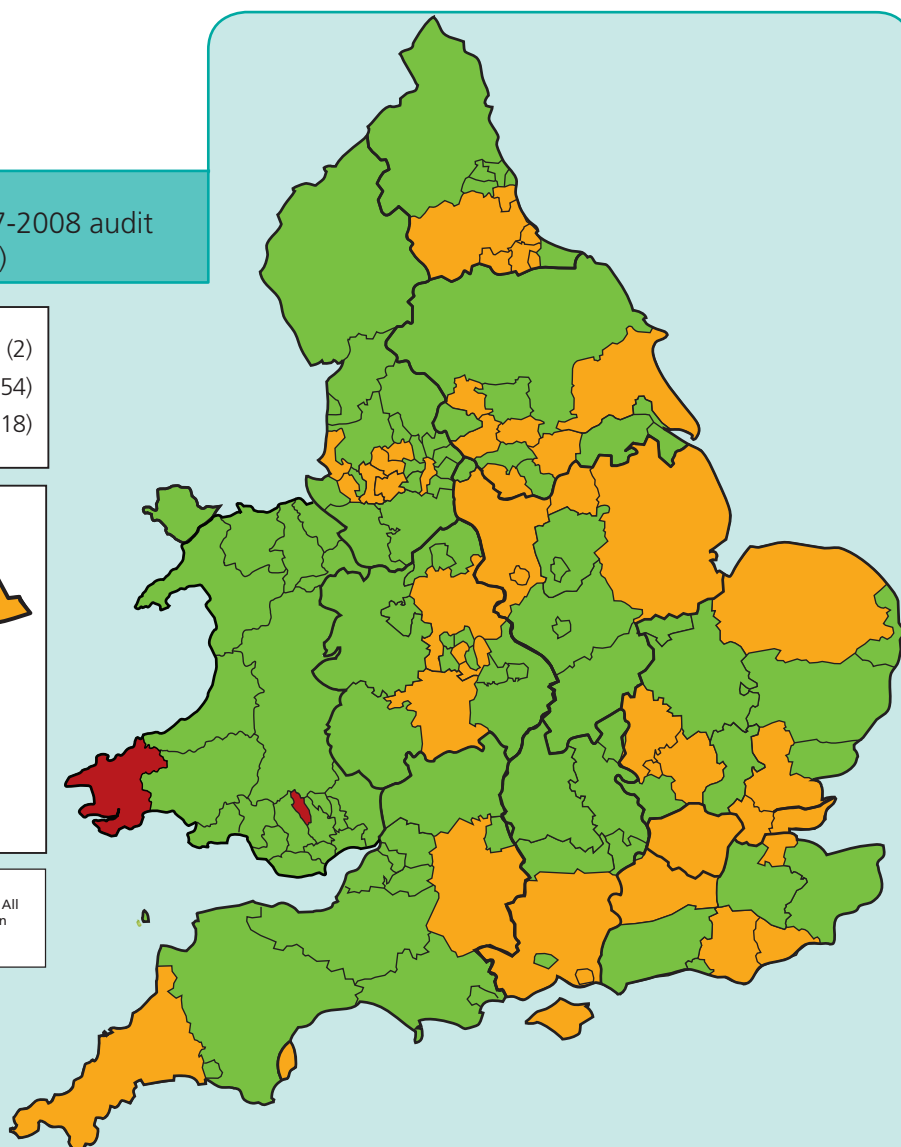
3. Care Processes: What proportion of people registered with diabetes received the key processes of diabetes care?

4. Treatment Targets: What proportion of people registered with diabetes achieved treatment targets?

Figure 1: Participation in the 2007-2008 audit period by Primary Care Trust (PCT)



Data sources: ONS Boundary Files 2006, PCT registered 2007/2008.
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Key Findings

England

The NDA collects data from primary and secondary care and specialist paediatric units in England providing an overview of the care for adults, children and young people with diabetes.

Participation

152 Primary Care Trusts (100 per cent) contributed data from 5359 GP practices for 1.42 million people with diabetes. This is a 17 per cent increase in the number of records compared to the previous audit year (2006-2007) and equals 57 per cent of the estimated number of people with diabetes in England (estimated 2.5 million by Yorkshire and Humber Public Health Observatory, PBS3 model)

Registrations

For participating organisations the prevalence of diagnosed diabetes is 3.90 per cent which is an increase from the previous year (3.79 per cent). The data submitted by participating practices represents 85 per cent of the number of people estimated to have diabetes for these practices (YHPHO PBS3 model).

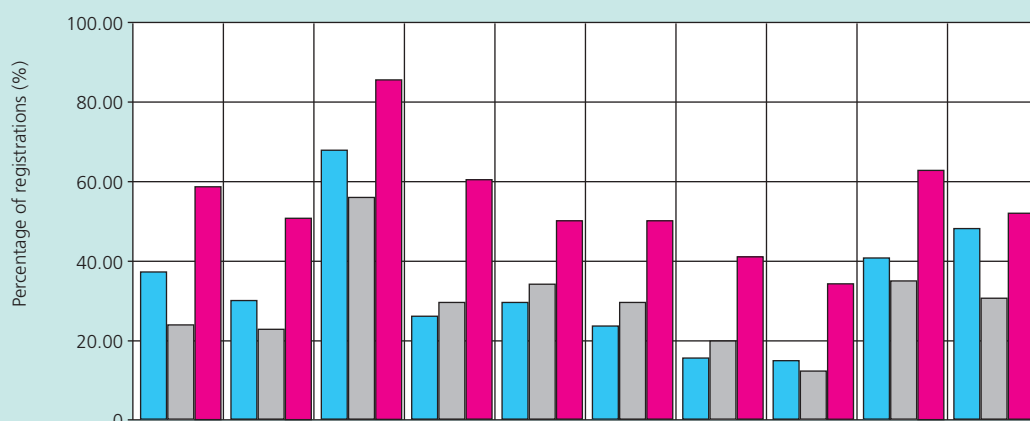
This means that 15 percent of people with diabetes may either be undiagnosed or not recorded on a practice register. This is an improvement compared to the 20 per cent undiagnosed or unrecorded in 2006-2007.

12 per cent (165,643) of the people with diabetes were diagnosed during 2007-2008. 1,211 people were recorded in secondary care and at the time of the audit were still unrecorded in primary care. This is a 65 per cent increase, compared to the previous audit year, on the number of people with diabetes recorded in secondary care who do not have their diagnosis recorded on a practice register.

The prevalence of diabetes remains higher in males (4.36 per cent) than females (3.47 per cent), consistent with previous audit years. However, there has been a slight increase in the prevalence, compared to the previous 2006-2007 audit year, for males from 4.26 per cent and in females from 3.35 per cent.

The percentage of records with an ethnic origin recorded has significantly improved compared to the previous audit year (from 31.96 per cent to 57.08 per cent) with the greatest improvement in East Midlands Strategic Health Authority SHA (24.92 per cent to 58.08 per cent) (Figure 2)

Figure 2: Percentage of registrations in England with an ethnic origin recorded, by Strategic Health Authority (SHA)



	East Midlands	East of England	London	North East	North West	South Central	South East Coast	South West	West Midlands	Yorkshire and the Humber
Ethnic origin recorded 2005/6	38.52	31.37	67.78	27.66	30.33	24.80	15.04	14.95	41.39	49.04
Ethnic origin recorded 2006/7	24.92	23.31	55.58	29.85	34.63	29.81	19.33	13.19	35.69	30.95
Ethnic origin recorded 2007/8	58.08	51.77	85.65	60.35	51.00	49.26	40.90	36.04	63.85	54.21

Complications

The prevalence of complications for participating organisations is ascertained by linking the English NDA data to the Hospital Episodes Statistics database (HES).

Approximately 10 per cent of all people with Type 1 diabetes have had an episode of Diabetic Ketoacidosis (DKA) in the past 5 years. DKA was found to be much more common in young people.

However there has been a downward trend in the number of people with Type 1 diabetes having an episode of DKA, for HES 1 year, from 3.97 per cent in 2003-2004 to 3.56 per cent in 2007-2008.

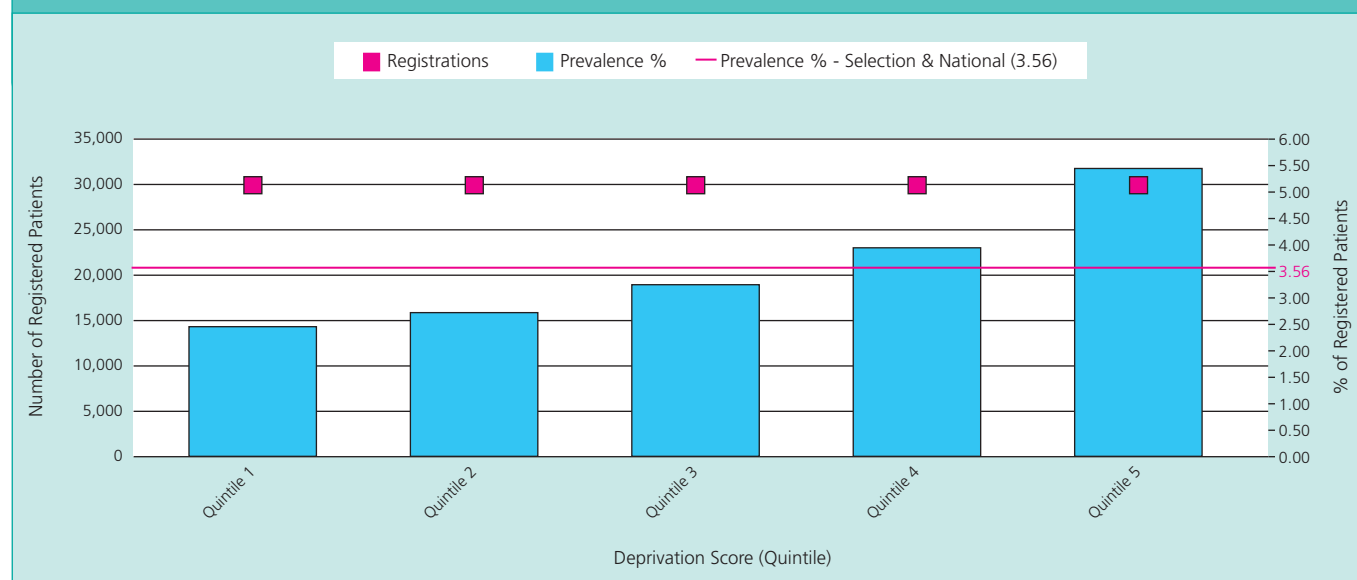
Although the risks of all diabetic complications apart from DKA increase with age appreciable numbers occur in the 25-40 year age group.

Figure 3: Prevalence percentage of renal failure by age band, for registrations from all sources, HES 1 year, for the 2007-2008 audit period

Age Band	Registrations (Totals)	Prevalence %
0 – 15 yrs	15136	0.09
16 - 24 yrs	20,007	0.11
25 - 39 yrs	77,854	0.39
40 - 54 yrs	271,399	0.35
55 - 69 yrs	510,473	0.35
70 - 84 yrs	458,747	0.38
85+ yrs	69,959	0.16
Total	1,423,575	0.34

All complications apart from eye disease are more common with increasing social deprivation with a two fold increase between the least and most deprived.

Figure 4: Prevalence percentage for DKA by deprivation quintile for Type 1 diabetes, for registrations from all sources, HES 1 year, for the 2007-2008 audit period

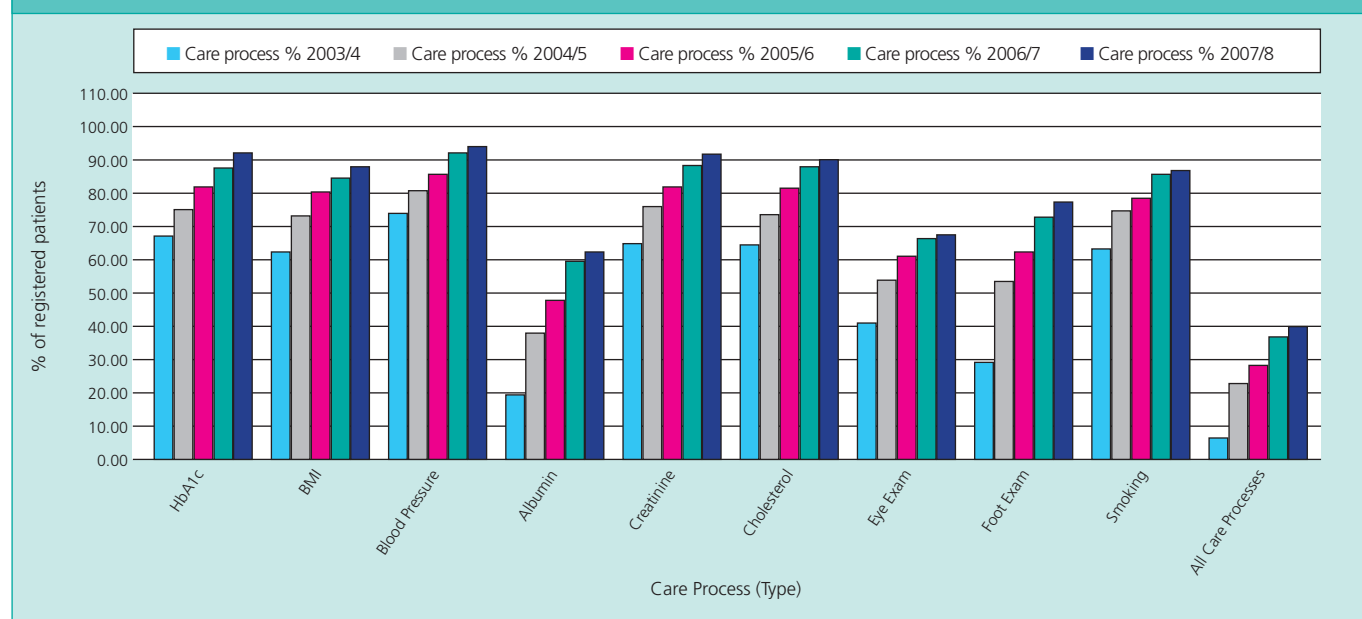


Even more striking, however, are the large differences in rates of complications between regions (e.g. up to twofold for Kidney Failure treatments and Amputation) and between PCTs (e.g. more than twofold for DKA, Myocardial Infarction, Heart Failure and Kidney Failure and more than fivefold for Stroke and Amputation).

Care Processes

The proportion of patients receiving each care process continues to increase. Measuring urine albumin creatinine ratio (UACR) is still the lowest rate care process at 62.72 per cent and blood pressure measurement the highest at 93.67 per cent.

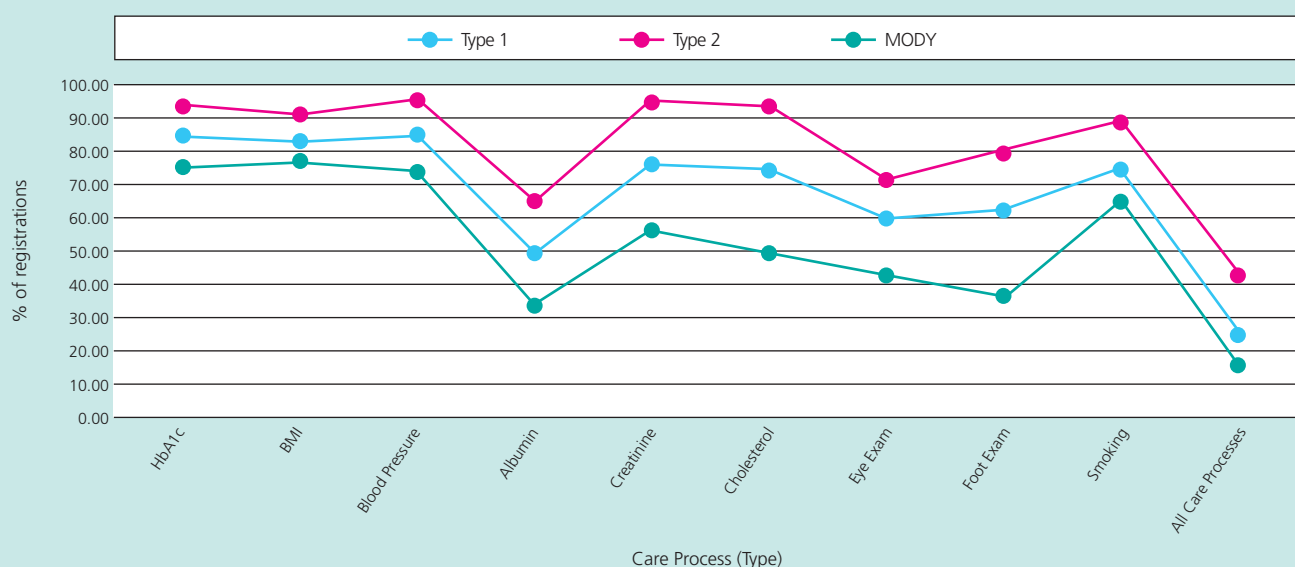
Figure 5: Percentage of people with diabetes in England achieving key care processes, over the 5 audit periods



The proportion of people with diabetes receiving all the recommended annual care processes also continues to increase. Now nearly 40 per cent receive all 9 National Institute for Clinical Excellence (NICE) recommended care processes as compared to only 6.5 per cent 5 years ago.

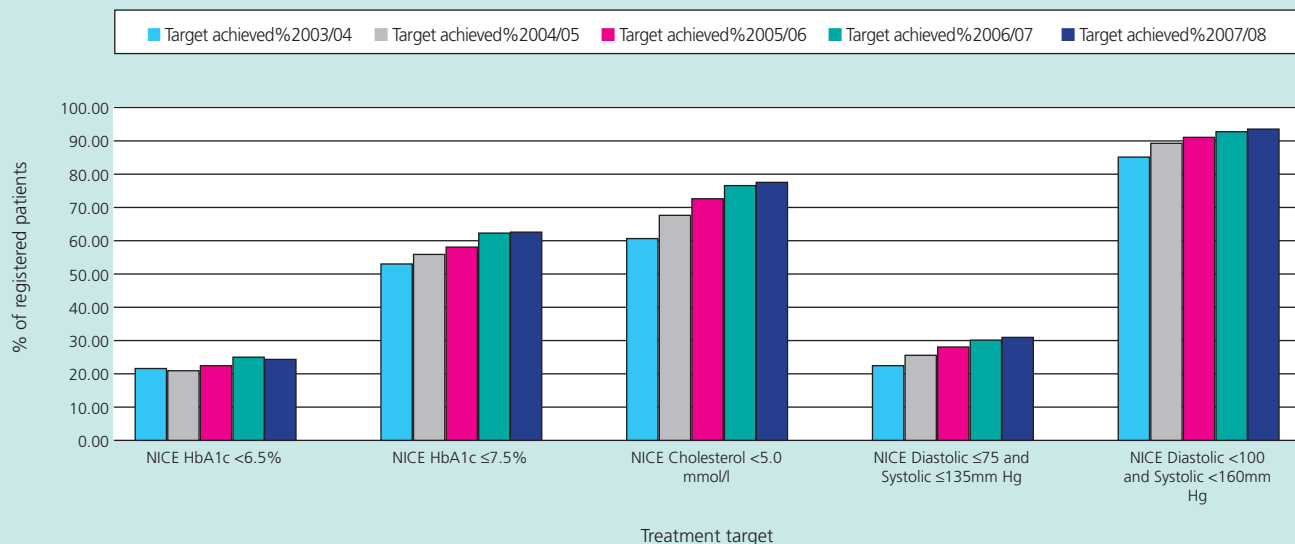
However 60 per cent still do not receive all the care processes. Furthermore the likelihood of receiving any of the care processes is less for people with Type 1 Diabetes and Maturity Onset Diabetes of the Young (MODY) than for those with Type 2 Diabetes (Figure 6).

Figure 6: Percentage of people with diabetes in England receiving the key care processes by diabetes type, for 2007-2008



Treatment Targets

Figure 7: Percentage of people with diabetes in England by NICE recommended treatment targets, over the 5 audit periods



HbA1c

In 2007-2008 91 per cent of the records included an HbA1c measurement. In just over 60 per cent of the records HbA1c was ≤ 7.5 per cent (NICE recommended), almost identical to the 2006-2007 audit period.

Thus almost 40 per cent of people with diabetes have an HbA1c value in the increased risk range (>7.5 per cent) and 7.6 per cent had a very high risk HbA1c of >10 per cent.

Two thirds (66.59 per cent) of people with Type 2 diabetes but only one third (29.71 per cent) of people with Type 1 diabetes achieved the NICE recommended HbA1c target of ≤ 7.5 per cent.

Following the same trend as the previous audit year the achievement of the NICE HbA1c measurement of ≤ 7.5 per cent is higher in the older age bands peaking at 77 per cent in the 85+ year age band.

Blood Pressure

30 per cent of people with diabetes who had their blood pressure checked within the audit period achieved the NICE recommended target of Diastolic ≤ 75 and Systolic ≤ 135 mmHg. NICE has revised its blood pressure target upward to 140/80 for 2008-2009.

As expected the blood pressure target of Diastolic ≤ 75 and Systolic ≤ 135 mmHg is more likely to be achieved in the youngest age groups. However, the lowest rate achieved was in the 40-54 year age band (25.34 per cent) which is similar to the previous audit year.

Cholesterol

90 per cent of people with diabetes had their cholesterol checked within the audit period of which 78 per cent achieved the NICE cholesterol target of <5.0 mmol/l.

As in previous audit years, there are slightly more males (81.53 per cent) compared to females (73.62 per cent) achieving the NICE cholesterol target of <5.0 mmol/l.

None of these HbA1c, blood pressure and cholesterol treatment target achievement rates are substantially different from 2006-2007. However, the degree of variation between practices, PCTs and regions suggests that more people with diabetes could be supported better to achieve target glucose, blood pressure and cholesterol levels. For example in some PCTs glucose control and blood pressure targets are achieved in 50 per cent more people than in others.

Wales

The NDA collects data from primary care and specialist paediatric units in Wales providing an overview of the care for adults, children and young people with diabetes.

Participation

In this first year of participation 73 General Practices in 20 of the 22 Local Health Boards (LHB) contributed data to the 2007-2008 audit. This is 15 per cent of the practices in Wales and includes 22,494 people with diabetes with 1,470 records from secondary care unknown to primary care.

Registrations

For participating practices the prevalence of diagnosed diabetes averaged 4.45 per cent. The prevalence of diabetes is higher in males (5.03 per cent) than females (3.89 per cent). These prevalence rates are slightly higher than the English averages and may suggest a good diabetes detection rate in the participating practices.

2,604 (12 per cent) of people with diabetes were diagnosed within the audit year, again similar to England.

99 per cent of records submitted had diabetes type recorded but only 27 per cent of records had ethnic origin recorded

Complications

The prevalence of complications for participating organisations, ascertained by linking the Welsh NDA data to the Patient Episode Database for Wales (PEDW), are very similar to those reported in the previous audit year (2006-2007) from organisations in England (Figure 8).

Care Processes

30 per cent of people with diabetes received all 9 of the key care processes assessed which is similar to the rate recorded in the third year of the NDA from participating organisations in England. This means that 70 per cent of people registered with diabetes are not receiving all the annual key processes of care.

Figure 8: Complication rates for people with diabetes in Wales, for 2007-2008 audit period

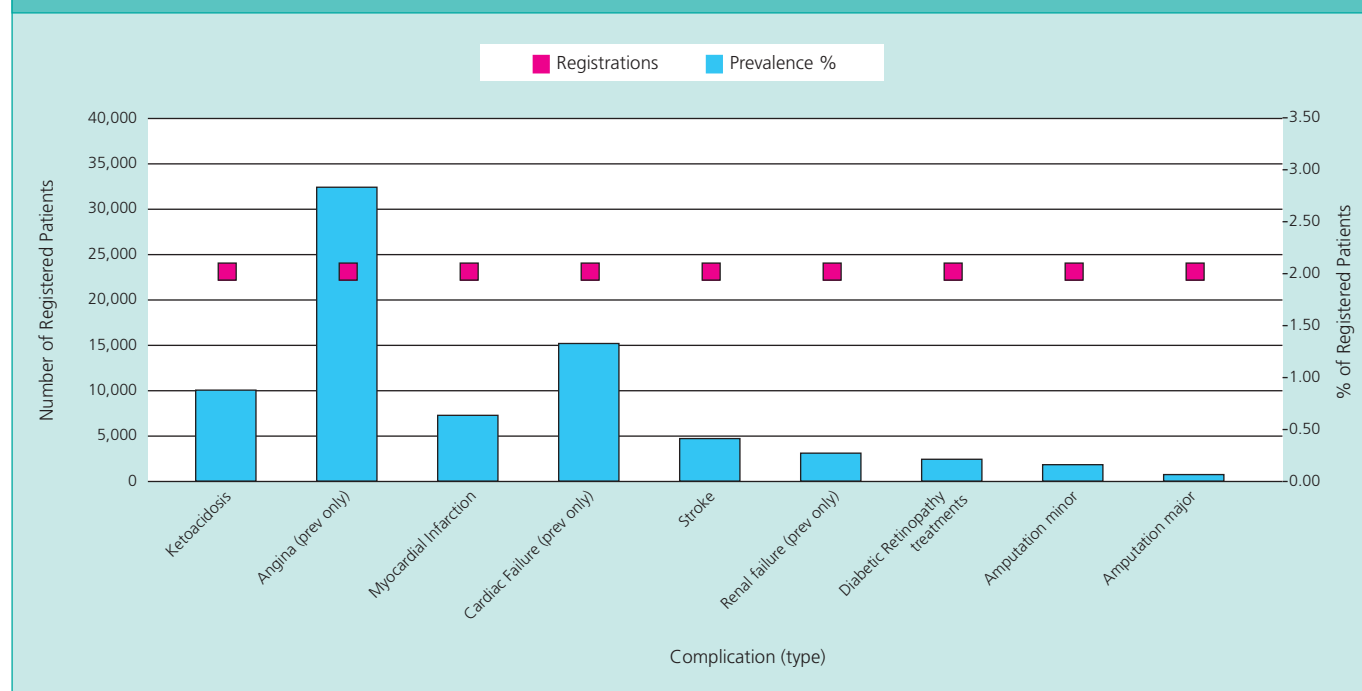
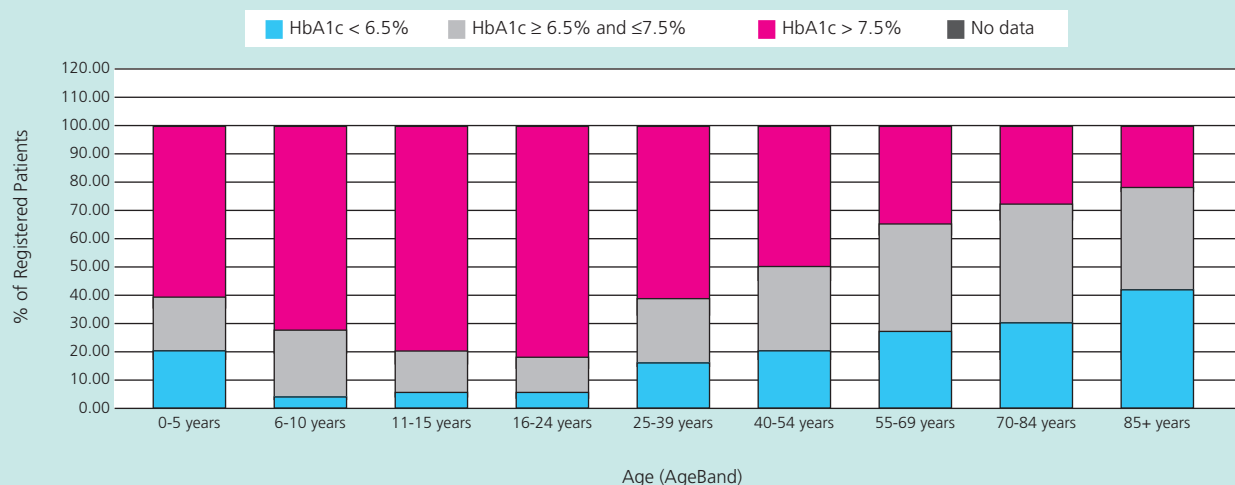


Figure 9: Percentage of people with diabetes in Wales achieving the NICE HbA1c recommended target by age band, for the 2007-2008 audit period



Many of the care processes are recorded as being performed in over 80 per cent of people with diabetes but eye screening, foot screening and urine albumin creatinine ratio testing are apparently much lower at 60, 65 and 70 per cent respectively. Furthermore key care processes were not performed as often in people recorded with Type 1 diabetes as in those with Type 2 diabetes.

Treatment Targets

HbA1c

60 per cent of people with diabetes have an HbA1c value within the NICE recommended lower risk range of ≤ 7.5 per cent which compares well with the average in England.

However 6,595 people with diabetes (35 per cent) have an HbA1c value within the increased risk range of > 7.5 per cent and 6.77 per cent have an HbA1c value in the very high risk range of > 10 per cent.

The percentage of people with diabetes achieving the NICE HbA1c target of ≤ 7.5 increases through the age bands and peaks at 42 per cent in the 85+ year age band (Figure 9)

Blood Pressure

Similar to the figures in England fewer than 30 per cent of people who had their blood pressure checked within the audit year achieved the NICE recommended target of Diastolic ≤ 75 and Systolic ≤ 135 mmHg. NICE has revised its guidance for 2008-2009 onwards to the less stringent target of 140/80.

Following the same trend as England the blood pressure target of Diastolic ≤ 75 and Systolic ≤ 135 mmHg is more likely to be achieved in the youngest groups. However, the lowest rate achieved was, as in England, in the 40-54 year age band (22 per cent).

Cholesterol

90 per cent of people with diabetes had their cholesterol measure recorded within the 2007-2008 audit period, of which 78 per cent achieved the NICE recommended cholesterol target of < 5.0 mmol/l.

There are slightly more males (81.92 per cent) compared to females (72.69 per cent) achieving the NICE cholesterol target of < 5.0 mmol/l.

Children and young people with diabetes

The NDA collects data from specialist paediatric units in England and Wales providing an overview of the care for children and young people with diabetes. A summary of the key findings for specialist paediatric units only are provided in this section of the report. The full findings for specialist paediatric units can be found in the NDA 2007-2008 Children and Young People annual report.

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.

Over 80 per cent of children and young people of all ages registered with diabetes had an HbA1c measure within the audit period.

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 for organisations in England and Wales

The National Health Service (NHS) should continue to improve diabetes detection rates and the recording of ethnicity in people with diabetes. PCTs and LHBs should work with diabetes networks, GPs and specialist teams to set local targets to improve detection and recording. For example in 2009-2010 the aim might be to achieve diagnosed prevalence >90 per cent of predicted and ethnicity recording >80 per cent.

Diabetic complications have high costs both to people with diabetes and to the healthcare system. There is good evidence that the frequency and severity of diabetic complications can be reduced. Commissioners and providers of diabetes care should consider how to respond to this evidence for continuing health inequality and geographical variation in diabetic complications.

Providers of diabetes care should work in partnership with people with diabetes and their carers to improve understanding of the importance of the annual key care processes in reducing the risk of long term complications. Convenience of access will need to be improved. Focus should also be given to awareness of the role of supported self-management. Special efforts should be made to raise awareness among and improve access for people with Type 1 diabetes and MODY.

Areas with treatment target achievement rates in the top quartile should share best practice with less well performing areas. Healthcare professionals should work in partnership with people with diabetes, and carers where appropriate, to agree and work towards achievement of treatment targets because this will reduce future complications. Particular effort should be made to look at strategies to support the improvement of glucose control for people with diabetes and to tackle the poorer glucose and blood pressure target achievement in younger age groups.

Paediatric diabetes teams should work with children and young people who have diabetes and their parents and carers to find ways of improving glucose control and reducing the proportion with very high risk glucose levels. PCTs and LHBs should commission services that have the capacity to support this.

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This Executive Summary presents the key findings from the fifth year of the National Diabetes Audit (NDA). It provides recommendations for both national and local organisations based on the analysis of the audit data.

This summary of key findings is supported by the NDA Dashboard containing National and local results for the 2007-2008 audit period for both England and Wales. The NDA Dashboard can be downloaded from the NDA webpage at:

www.ic.nhs.uk/diabetesaudits

For further information about this report or the NDA Dashboard, please contact The NHS Information Centre's Contact Centre on 0845 300 6016 or email enquiries@ic.nhs.uk quoting reference number IC10060109.

Prepared in partnership with:



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