

#### National Diabetes Audit, 2019-20 Report 1: Care Processes and Treatment Targets

England and Wales 12 August 2021

**Annual Report** 

Information and technology for better health and care

### **Contents: Navigation**

Chapter	Slide
Executive Summary	<u>3-6</u>
Aims and Objectives	<u>3</u>
Audit Participation	<u>4</u>
Key Findings	<u>5</u>
Key Recommendations	<u>6</u>
Care Processes and Treatment Targets: National Summary, 2015-20	<u>7</u>
Care Processes and Treatment Targets: Variation by CCG/LHB, 2019-20	<u>12</u>
What percentage of people registered with diabetes are offered and attend a structured education course?	<u>19</u>
Additional Information	<u>27</u>

**Home button** – available on slides to return to Contents: Navigation

## **Executive Summary: Aims and Objectives**

The National Diabetes Audit (NDA) provides a comprehensive view of diabetes care in England and Wales. It measures the effectiveness of diabetes healthcare against NICE Clinical Guidelines and NICE Quality Standards.

The NDA supports improvement in the quality of diabetes care by enabling participating NHS services and organisations to:

- Assess local practice against NICE guidelines.
- Compare their care, and care outcomes, with similar services and organisations.
- Identify gaps or shortfalls that are priorities for improvement.
- Identify and share best practice.
- Provide a comprehensive national picture of diabetes care and outcomes in England and Wales.

This is the annual national report of care process completion and treatment target attainment. A 2019-20 data release was published in December 2020. <sup>3</sup> GP practice and specialist service level information accompanies this report and can be found <u>here</u>.

## **Executive Summary: Audit Participation**

# Primary care participation stood at 99.3 per cent in 2019-20 in England and Wales.

In all but six English Clinical Commissioning Groups (CCGs) and Welsh Local Health Boards (LHBs) (136 of 142), GP practice participation was 95 per cent and over. Participation did not fall below 88 per cent in any CCG/LHB.

#### 98 specialist services participated in 2019-20 in England\*.

- 38 services submitted both the NDA core dataset and the insulin pump dataset
- 5 services submitted only the insulin pump dataset
- 55 services submitted only the NDA core dataset

Specialist services generally take the lead in care for Type 1 diabetes services and also often for younger people with Type 2 diabetes. More comprehensive involvement in the audit by specialist services is important as part of the drive to improve the care received by their patients.

For more information on the level of participation in 2019-20 by CCG and LHB please see the participation summary accompanying this report - <u>www.digital.nhs.uk/pubs/ndauditcorerep1920</u>.

## **Executive Summary: Key Findings**

#### **Key Finding 1**

The proportion of people with type 1 diabetes who had HbA1c<=58mmol/mol (7.5%) varied considerably between CCGs. Of 135 CCGs, 17 had significantly higher than expected (better) proportions of people with HbA1c<=58mmol/mol (7.5%) (greater than 3 standard deviations above mean), and 15 CCGs had significantly lower (worse) proportions (more than 3 standard deviations below mean).

#### **Key Finding 2**

The proportion of people with type 2 diabetes with a recorded measurement of Urine Albumin Creatinine Ratio (UACR) varied significantly between CCGs. Of 135 CCGs, 40 had significantly higher than expected proportions of people with a recorded UACR measurement (greater than 3 standard deviations above mean) and 45 CCGs had significantly lower proportions (more than 3 standard deviations below mean).



### **Executive Summary: Key Recommendations**

- 1. Services should consider whether high performing services are doing something you might adopt to improve achievement of HbA1c <= 58mmol/mol (7.5%). In a survey of high performing specialist Type 1 services all respondents cited the following as important service characteristics: Commitment to Type 1 care, Desire to do better, Dedicated Pump clinics, Importance of structured education.
- 2. CCGs and LHBs should consider whether high performing CCGs and LHBs are doing something you might adopt to improve Urine Albumin Creatinine Ratio (UACR) measurement. CCGs with high case-mix adjusted rates of Urine Albumin Creatinine Ratio (UACR) measurement include: Bury, NE Essex, Hounslow, Oxfordshire, South Tyneside, Manchester, Barking & Dagenham.
- 3. Services should consider joining one of the NDA Quality Improvement Collaboratives.

https://www.diabetes.org.uk/professionals/resources/national-diabetes-audit/qualityimprovement-collaboratives#apply

#### **National Diabetes Audit 2019-20**

Care Processes and Treatment Targets: National Summary, 2015-20





## Care Processes: Type 1 by Country, 2015-20

### Table 1: Percentage of people with type 1 diabetes receiving NICE recommended careprocesses by audit year and country, 2015-16 to 2019-20

Care Process	England (per cent)					
	2015-16	2016-17	2017-18	2018-19	2019-20	
HbA1c	84.5	84.9	85.4	86.3	83.6	
Blood Pressure	89.4	90.6	91.1	91.5	90.5	
Serum Cholesterol	80.0	80.8	81.1	81.8	78.5	
Serum Creatinine*	82.1	83.3	83.5	83.9	80.9	
Urine Albumin/Creatine Ratio	51.0	51.0	52.3	49.3	53.5	
Foot Risk Surveillance	73.7	70.1	75.1	75.8	72.5	
BMI	75.8	75.8	82.7	84.5	83.7	
Smoking history	79.0	79.8	90.4	90.8	89.8	
Eight Care Processes	37.3	34.4	42.9	40.8	42.3	
Retinal Screening	-	-	-	-	79.4	
Nine Care Processes	-	-	-	-	37.4	

Care Process		W	ales (per cen	t)	
	2015-16	2016-17	2017-18	2018-19	2019-20
HbA1c	73.3	74.7	74.7	73.8	71.4
Blood Pressure	85.2	84.8	83.5	82.4	80.3
Serum Cholesterol	67.0	66.4	65.2	64.1	60.7
Serum Creatinine	73.5	74.0	73.8	73.3	71.3
<b>Urine Albumin/Creatine Ratio</b>	39.5	36.2	35.1	33.8	31.9
Foot Risk Surveillance	62.3	60.6	56.9	52.8	47.7
BMI	67.5	67.2	66.7	66.5	65.8
Smoking history	71.7	70.0	82.8	80.5	78.2
Eight Care Processes	25.7	23.8	24.7	23.3	21.4
Retinal Screening	-	-	-	-	-
Nine Care Processes	-	-	-	-	-

For NDA 2019-20, Diabetes Eye Screening (DES) data were collected directly from DES providers in England for the first time. All but one DES provider in England (Liverpool) successfully submitted data, although three providers made only partial submissions.

For Liverpool, eye examination information recorded in Primary Care systems were used, which is likely to be incomplete as it is reliant on the eye screening services informing the GP practices, and those practices recording it in their systems.

The new 'Retinal Screening' care process measure is reported for England and feeds into the new 'All Nine Care Processes' measure. The 'All Eight Care Processes' continues to be reported for both England and Wales.

\* Two creatinine plasma SNOMED codes were removed from the NDA creatinine code set during the universal SNOMED code refresh. This has affected 2019-20 creatinine care process completion percentages for a small number of organisations/areas in England. The issue has been rectified for future NDA 2020-21 data extractions.

8

## Care Processes: Type 2 by Country, 2015-20

#### Table 2: Percentage of people with type 2 and other diabetes receiving NICErecommended care processes by audit year and country, 2015-16 to 2019-20

Care Process	England (per cent)						
Cale Flocess	2015-16	2016-17	2017-18	2018-19	2019-20		
HbA1c	95.1	95.3	95.3	95.3	93.5		
Blood Pressure	95.8	96.4	96.3	96.2	95.4		
Serum Cholesterol	93.1	93.1	92.9	92.8	91.0		
Serum Creatinine*	94.8	95.1	95.1	94.4	92.3		
<b>Urine Albumin/Creatine Ratio</b>	66.8	65.6	66.2	61.1	68.6		
Foot Risk Surveillance	87.1	79.4	86.8	86.7	83.9		
BMI	82.8	83.3	88.0	88.8	88.3		
Smoking history	85.4	85.7	95.5	95.8	95.4		
Eight Care Processes	53.9	47.7	58.8	54.3	58.5		
Retinal Screening	-	-	-	-	80.4		
Nine Care Processes	-	-	-	-	52.2		
Care Process	Wales (per cent)						
	2015-16	2016-17	2017-18	2018-19	2019-20		
	02.0	0.2.0	02.4	02.1	01.2		

Care Process	2015-16	2016-17	2017-18	2018-19	2019-20
HbA1c	92.9	92.8	92.4	92.1	91.3
Blood Pressure	94.9	94.4	93.3	92.3	91.1
Serum Cholesterol	87.9	86.9	85.1	84.2	82.8
Serum Creatinine	93.3	93.1	92.9	92.7	92.1
Urine Albumin/Creatine Ratio	64.6	59.8	56.9	56.1	55.0
Foot Risk Surveillance	81.2	78.6	74.8	72.5	68.6
BMI	80.7	79.7	79.0	79.7	79.4
Smoking history	83.4	82.2	91.7	90.7	89.3
Eight Care Processes	50.7	47.0	45.9	44.7	42.6
Retinal Screening	-	-	-	-	-
Nine Care Processes	-	-	-	-	-

For NDA 2019-20, Diabetes Eye Screening (DES) data were collected directly from DES providers in England for the first time. All but one DES provider in England (Liverpool) successfully submitted data, although three providers made partial submissions.

For Liverpool, eye examination information recorded in Primary Care systems were used, which is likely to be incomplete as it is reliant on the eye screening services informing the GP practices, and those practices recording it in their systems.

The new 'Retinal Screening' care process measure is reported for England and feeds into the new 'All Nine Care Processes' measure. The 'All Eight Care Processes' continues to be reported for both England and Wales.

\* Two creatinine plasma SNOMED codes were removed from the NDA creatinine code set during the universal SNOMED code refresh. This has affected 2019-20 creatinine care process completion percentages for a small number of organisations/areas in England. The issue has been rectified for future NDA 2020-21 data extractions.

#### Treatment Targets: Type 1 by Country, 2015-20

### Table 3: Percentage of people with type 1 diabetes achieving their treatment targets byaudit year and country, 2015-16 to 2019-20

Treatment terrat	England (per cent)				
Treatment target	2015-16	2016-17	2017-18	2018-19	2019-20
HbA1c ≤ 58 mmol/mol	29.6	30.4	29.9	31.1	31.6
Blood pressure ≤ 140/80	75.7	76.0	74.8	74.8	73.9
Statins for Primary Prevention of CVD	-	-	65.4	64.8	66.2
Statins for Secondary Prevention of CVD	-	-	85.3	84.4	85.1
Statins for Combined Prevention of CVD	-	-	68.9	68.3	69.4
Meeting all three treatment targets NEW*	-	-	18.9	19.6	20.0

Trootmont toract	Wales (per cent)				
Treatment target	2015-16	2016-17	2017-18	2018-19	2019-20
HbA1c ≤ 58 mmol/mol	23.9	26.8	26.0	27.5	26.3
Blood pressure ≤ 140/80	74.7	73.3	71.6	68.7	65.9
Statins for Primary Prevention of CVD	-	-	63.8	63.2	62.9
Statins for Secondary Prevention of CVD	-	-	84.0	84.0	84.1
Statins for Combined Prevention of CVD	-	-	67.3	66.6	66.5
Meeting all three treatment targets NEW*	-	-	15.2	15.1	14.2

In England there was an improvement in the HbA1c achievement rate over the past five years, but this was limited. Since the statin treatment targets were introduced in 2017-18 there was some improvement in the overall three treatment target rate, but this was also limited.

The rates in Wales are below those in England. The three treatment target rate has decreased slightly since 2017-18.

#### Treatment Targets: Type 2 by Country, 2015-20

#### Table 4: Percentage of people with type 2 and other diabetes achieving their treatmenttargets by audit year and country, 2015-16 to 2019-20

Treatment target	England (per cent)				
Treatment target	2015-16	2016-17	2017-18	2018-19	2019-20
HbA1c ≤ 58 mmol/mol	65.9	67.0	65.8	66.5	65.6
Blood pressure ≤ 140/80	73.7	74.4	73.8	74.5	73.6
Statins for Primary Prevention of CVD	-	-	72.2	70.9	72.3
Statins for Secondary Prevention of CVD	-	-	86.7	85.8	86.4
Statins for Combined Prevention of CVD	-	-	76.1	74.9	76.1
Meeting all three treatment targets NEW*	-	-	40.2	40.5	40.1

In England there have been no appreciable changes at national level in the individual target or all target bundle rates during the past five years.

In Wales the rates have been decreasing.

Treatment target	Wales (per cent)				
	2015-16	2016-17	2017-18	2018-19	2019-20
HbA1c ≤ 58 mmol/mol	63.0	64.7	63.0	62.7	61.1
Blood pressure ≤ 140/80	72.4	71.1	68.4	66.8	64.6
Statins for Primary Prevention of CVD	-	-	69.4	68.3	67.5
Statins for Secondary Prevention of CVD	-	-	84.6	84.7	84.2
Statins for Combined Prevention of CVD	-	-	73.5	72.6	72.0
Meeting all three treatment targets NEW*	-	-	35.0	33.6	31.5

#### **National Diabetes Audit 2019-20**

Care Processes and Treatment Targets: Variation by CCG/LHB, 2019-20

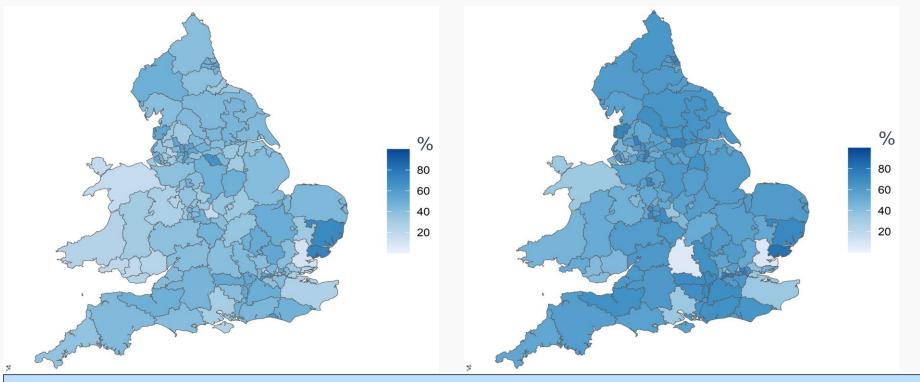




#### **Care Processes: CCG/LHB Variation, Mapped**

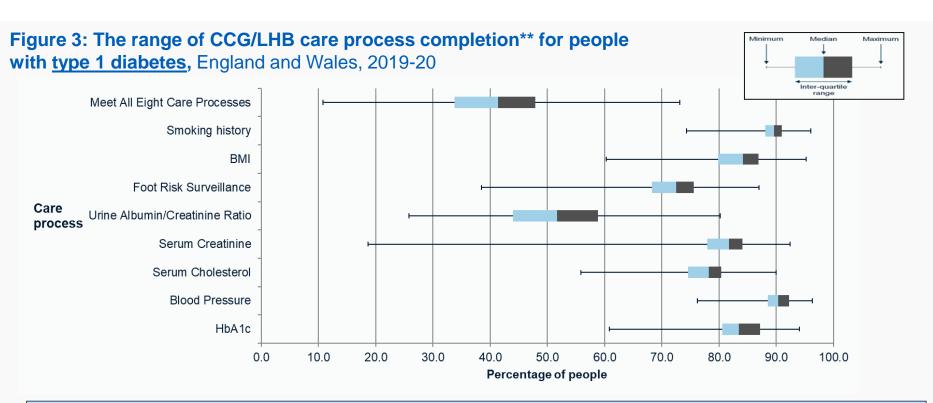
Figure 1: The range of CCG/LHB eight care process completion for people with type 1 diabetes, England and Wales, 2019-20

Figure 2: The range of CCG/LHB eight care process completion for people with type 2 and other diabetes, England and Wales, 2019-20



For continuity with previous reports, and to avoid inappropriate comparisons between England (eye screening data available) and Wales (eye screening data not available), these maps illustrate the substantial geographical variation in completion of all eight care processes. There is some distortion in a small number of CCGs because two plasma creatinine SNOMED codes were removed from the NDA creatinine code set during the universal SNOMED code refresh. The issue has been rectified for future NDA 2020-21 data extractions.

### **Care Processes: CCG/LHB Variation, Range**



There were marked CCG and LHB differences in care process completion, particularly for urine albumin/creatinine ratio and foot risk surveillance.

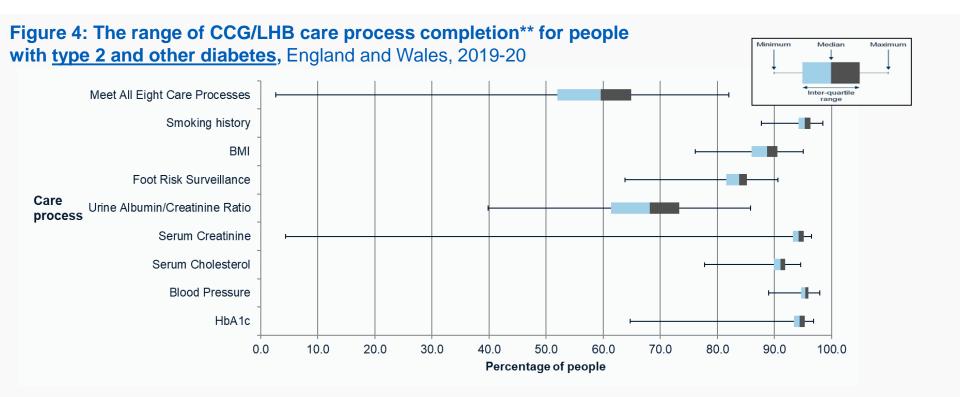
The creatinine SNOMED code issue which affected a small number of CCGs/areas has distorted the range of creatinine care process completion.

Variation between type 1 specialist services (see service level reports\*) is similar. Some of the variation is associated with patient demographics\*\* but substantial differences persist after standardisation (case-mix adjustment).

<sup>\*</sup> GP practice and specialist service level information accompanies this report - www.digital.nhs.uk/pubs/ndauditcorerep1920

<sup>\*\*</sup> In the benchmarking tables, care process completion rates are presented with case-mix adjusted bandings that show whether a service is achieving the care process delivery levels expected for their patient population. The bandings take into account age, gender, ethnicity, duration of diabetes and social deprivation. See the accompanying methodology document for full details - www.digital.nhs.uk/pubs/ndauditcorerep1920

#### **Care Processes: CCG/LHB Variation, Range**



There were marked CCG and LHB differences in care process completion, particularly for urine albumin/creatinine ratio and foot risk surveillance.

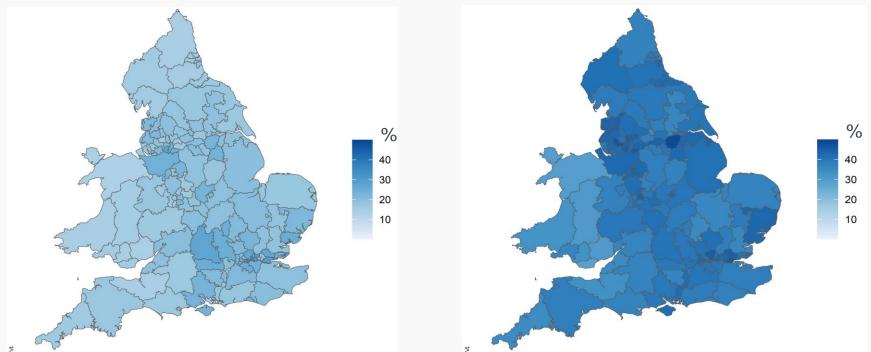
The creatinine SNOMED code issue which affected a small number of CCGs/areas has distorted the range of creatinine care process completion.

\*\* In the benchmarking tables, care process completion rates are presented with case-mix adjusted bandings that show whether a service is achieving the care process delivery levels expected for their patient population. The bandings take into account age, gender, ethnicity, duration of diabetes and social deprivation. See the accompanying methodology document for full details - <u>www.digital.nhs.uk/pubs/ndauditcorerep1920</u>

<sup>\*</sup> GP practice and specialist service level information accompanies this report - www.digital.nhs.uk/pubs/ndauditcorerep1920

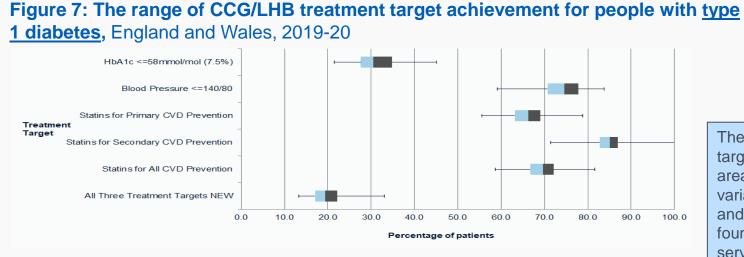
#### **Treatment Targets: CCG/LHB Variation, Mapped**

Figure 5: The range of CCG/LHB three treatment target achievement for people with type 1 diabetes, England and Wales, 2019-20 Figure 6: The range of CCG/LHB three treatment target achievement for people with type 2 and other diabetes, England and Wales, 2019-20

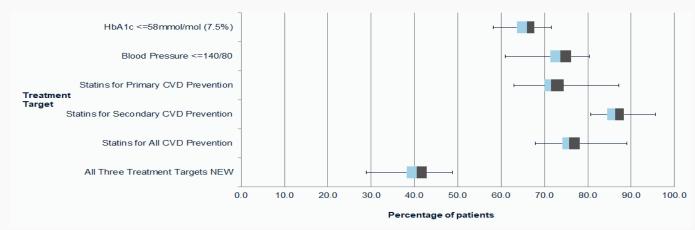


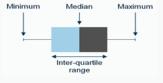
The three treatment targets according to NICE guidance are: HbA1c  $\leq$  58mmol/mol (7.5%), BP  $\leq$  140/80, and prescribed a statin. Rates were higher for type 2 diabetes largely because HbA1c was much more often  $\leq$  58mmol/mol (7.5%). Between CCG/LHB, rates varied appreciably.

#### **Treatment Targets: CCG/LHB Variation, Range**



#### Figure 8: The range of CCG/LHB treatment target achievements for people with type 2 and other diabetes, England and Wales, 2019-20





There were high levels of target achievement in some areas. However, considerable variation existed across CCGs and LHBs, which was also found between specialist services (see service level reports\*).

Differences in population patient demographics are associated with treatment target achievement, but do not sufficiently explain the differences in likelihood of treatment target achievement\*\*.

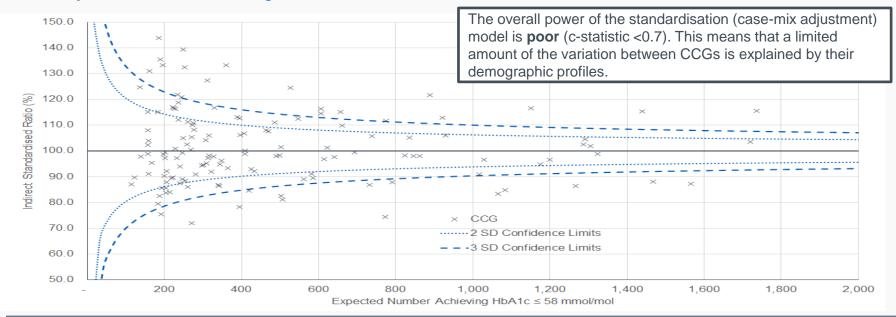
\* GP practice and specialist service level information accompanies this report - <u>www.digital.nhs.uk/pubs/ndauditcorerep1920</u>

Treatment target achievement forms one of the oversight metrics in the NHS Oversight Framework 2019-20

\*\* See the accompanying methodology document for full details on demographic modelling - www.digital.nhs.uk/pubs/ndauditcorerep1920

### HbA1c Target: Type 1 CCG Variation

#### Figure 9: Number of people with type 1 diabetes and HbA1c<=58mmol/mol (7.5%) by CCG, indirectly standardised\*, England, 2019-20

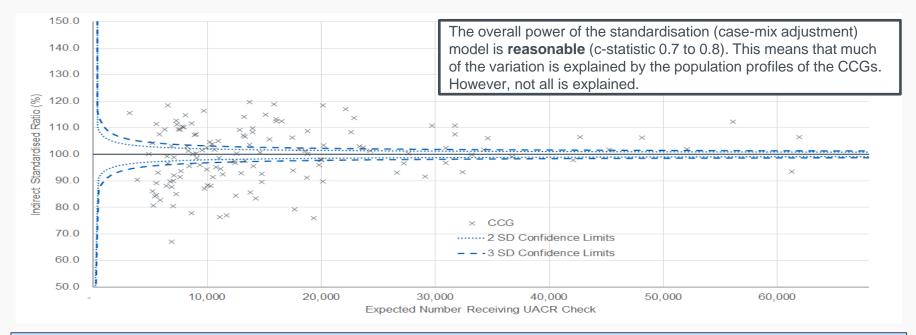


**Key Finding 1:** The proportion of people with type 1 diabetes who had HbA1c<=58mmol/mol (7.5%) varied considerably between CCGs. Of 135 CCGs, 17 had significantly higher than expected (better) proportions of people with HbA1c<=58mmol/mol (7.5%) (greater than 3 standard deviations above mean), and 15 CCGs had significantly lower (worse) proportions (more than 3 standard deviations below mean).

<sup>\*</sup> Logistic regression used for indirect standardisation. Variables included are: sex, age, ethnicity, deprivation, BMI, diabetes duration, smoking status, statin use, history of cardiovascular disease. See the accompanying methodology document for full details - www.digital.nhs.uk/pubs/ndauditcorerep1920

### **UACR Care Process: Type 2 CCG Variation**

## Figure 10: Number of people with type 2 diabetes with a recorded Urine Albumin/Creatinine Ratio (UACR) care process check, by CCG, indirectly standardized\*, England, 2019-20



**Key Finding 2:** The proportion of people with type 2 diabetes with a recorded measurement of Urine Albumin/Creatinine Ratio (UACR) varied significantly between CCGs. Of 135 CCGs, 40 had significantly higher than expected proportions of people with a recorded UACR measurement (greater than 3 standard deviations above mean) and 45 CCGs had significantly lower proportions (more than 3 standard deviations below mean).

\* Logistic regression used for indirect standardisation. Variables included are: sex, age, ethnicity, deprivation, BMI, diabetes duration, smoking status, statin use, history of cardiovascular disease. See the accompanying methodology document for full details - <a href="http://www.digital.nhs.uk/pubs/ndauditcorerep1920">www.digital.nhs.uk/pubs/ndauditcorerep1920</a>

#### National Diabetes Audit 2019-20

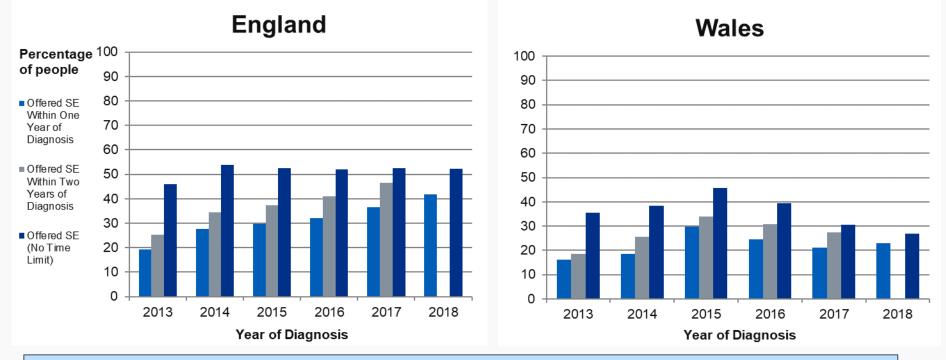
What percentage of people registered with diabetes are offered and attend a structured education course?





### **Structured Education: Offered – Type 1**

Figure 11: Percentage of people diagnosed with type 1 diabetes that were offered structured education (SE), by country and year of diagnosis, 2019-20\*



In England, recorded offers of structured education, with no time limit, remained around the same levels for the last three to four years. There was an increase in offer rates within one and two years of diagnosis.

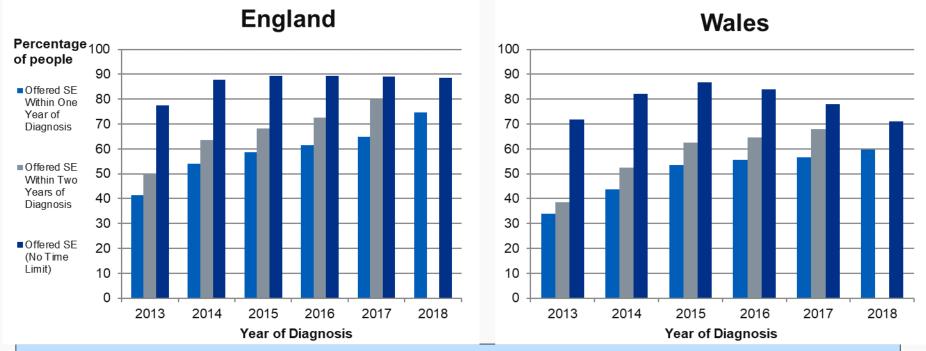
It is noted that offered dates can sometimes change between audit periods, suggesting that structured education is being re-offered if declined initially.

21

<sup>\* &#</sup>x27;Offered structured education within 2 years of diagnosis' data is not reported for people diagnosed with diabetes in 2018 – this is because the 2019-20 NDA data (latest audit period) ends in March 2020, meaning that anyone diagnosed after March 2018 would not have the full 2 year opportunity to be offered structured education.

### **Structured Education: Offered – Type 2**

Figure 12: Percentage of people diagnosed with type 2 and other diabetes that were offered structured education (SE), by country and year of diagnosis, 2019-20\*



In England, recorded offers of structured education, with no time limit, remained around the same levels for the last three to four years. There was an increase in offer rates within one and two years of diagnosis.

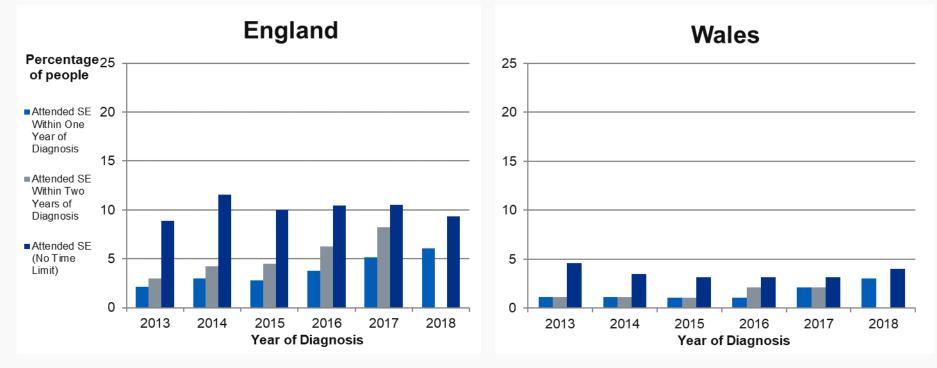
It is noted that offered dates can sometimes change between audit periods, suggesting that structured education is being re-offered if declined initially.

\* 'Offered structured education within 2 years of diagnosis' data is not reported for people diagnosed with diabetes in 2018 – this is because the 2019-20 NDA data (latest audit period) ends in March 2020, meaning that anyone diagnosed after March 2018 would not have the full 2 year opportunity to be offered structured education.

22

### **Structured Education: Attended – Type 1**

Figure 13: Percentage of people diagnosed with type 1 diabetes that have a recorded structured education (SE) programme attendance, by country and year of diagnosis,

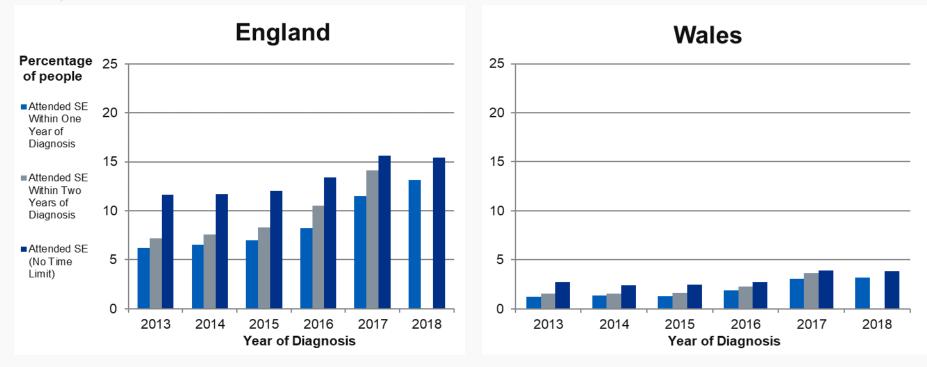


It is believed that poor recording means that the apparently low rates of attendance at a structured education programme are an underestimation. Although, in England, attendance rates within one or two years have increased.

<sup>\* &#</sup>x27;Attended structured education within 2 years of diagnosis' data is not reported for people diagnosed with diabetes in 2018 – this is because the 2019-20 NDA data (latest audit period) ends in March 2020, meaning that anyone diagnosed after March 2018 would not have the full 2 year opportunity to attend structured education. Attendance at structured education forms one of the indicators in the <u>CCG improvement and assessment framework 2018-19</u>.

### **Structured Education: Attended – Type 2**

Figure 14: Percentage of people diagnosed with type 2 and other diabetes that have a recorded structured education (SE) programme attendance, by country and year of diagnosis, 2019-20\*



It is believed that poor recording means that the apparently low rates of attendance at a structured education programme are an underestimation. Although, in England, attendance rates within one or two years have increased.

\* 'Attended structured education within 2 years of diagnosis' data is not reported for people diagnosed with diabetes in 2018 – this is because the 2019-20 NDA data (latest audit period) ends in March 2020, meaning that anyone diagnosed after March 2018 would not have the full 2 year opportunity to attend structured education. Attendance at structured education forms one of the indicators in the <u>CCG improvement and assessment framework 2018-19</u>.

24

#### National Diabetes Audit 2019-20

Additional information





## Registrations

#### Table 5: Diabetes registrations and prevalence for all diabetes by source, England and Wales, 2010, 20

England and Wales, 2019-20

Audit Year	Total number of registrations*	Percentage of the population**	Registrations from primary care	Registrations from specialist care where there is no corresponding GP record
2019-20	3,675,585	7.2	3,636,580	39,000
Percentage of 10 the England 9 population 8 with diabetes 7 6 5 4 3 2 1 0 20	010-11 2011-12 2012-13 2013	-14 2014-15 2015-16 2016-17 Audit period	2017-18 2018-19 2019-20	The prevalence of diabetes has generally increased year on year since 2010-11 in England and Wales from less than 5 per cent to more than 7 per cent. The NDA experienced lower participation rates in 2013-14 and 2014-15, which may have affected the reported prevalence for those years.

The National Cardiovascular Intelligence Network (NCVIN) publishes a diabetes prevalence model for local authorities and CCGs. It uses Health Survey for England data to estimate the total number of diagnosed and undiagnosed people with diabetes aged 16 and over in England and can be found here: <u>https://www.gov.uk/government/publications/diabetes-prevalence-estimates-for-local-populations</u>

<sup>\*</sup> Total registrations include all people submitted by GP practices and specialist care and will therefore be different to the GP practice level figures provided in the NDA interactive reports. GP practice level figures, as well as national care process and treatment target figures throughout the report, are based only on people submitted by GP practices. \*\* Population is the participating GP practice list size

#### **Care Processes**

All people with diabetes aged 12 years and over should receive all of the nine NICE recommended care processes and attend a structured education programme shortly after diagnosis.

#### Table 6: Nine Annual Care Processes for all people with diabetes aged 12 and over

Responsibility of Diabetes Care providers (comprising the NDA 8 Care Processes)

1. HbA1c	5. Urine Albumin/Creatinine Ratio
(blood test for glucose control)	(urine test for risk of kidney disease)
2. Blood Pressure	6. Foot Risk Surveillance
(measurement for cardiovascular risk)	(examination for foot ulcer risk)
<b>3. Serum Cholesterol</b> (blood test for cardiovascular risk)	<b>7. Body Mass Index</b> (measurement for cardiovascular risk)
<b>4. Serum Creatinine</b> (blood test for kidney function)	<b>8. Smoking History</b> (question for cardiovascular risk)

Responsibility of NHS Diabetes Eye Screening (NHS England, Public Health England)\*

9. Digital Retinal Screening

(photographic eye test for early detection of eye disease)

#### **Treatment Targets**

NICE recommends treatment targets for HbA1c (glucose control), blood pressure and Cardiovascular Disease (CVD) risk reduction:

- Target HbA1c reduces the risk of all diabetic complications (eyes, kidney, nerves) and CVD risk.
- Target blood pressure reduces CVD risk and reduces the progression of diabetic eye and kidney disease.
- Statins reduce serum cholesterol and CVD risk.
- NICE treatment target specifications were updated in 2015-16 and now differ between type 1 and type 2 diabetes (https://www.nice.org.uk/guidance/ng17; https://www.nice.org.uk/guidance/ng28).



### **Definitions**

#### **Diabetes**

Diabetes is a condition where the amount of glucose in the blood is too high because the pancreas doesn't produce enough insulin. Insulin is a hormone produced by the pancreas that allows glucose to be used as a body fuel and other nutrients to be used as building blocks. There are two main types of diabetes: type 1 diabetes (no insulin); type 2 diabetes (insufficient insulin).

#### Urine Albumin-to-Creatinine Ratio (UACR)

UACR is a ratio between two measured substances urine albumin and urine creatinine. Unlike a urine dipstick test for albumin, UACR is unaffected by variation in urine concentration.

#### **Specialist Service**

This is a service (often hospital based but sometimes delivered in a community setting) which includes diabetes specialists working in multidisciplinary teams. These teams usually comprise physicians (diabetologists), diabetes specialist nurses and dieticians; it may also include clinical psychologists.

#### **Annual Review**

This is a GP appointment where the annual NICE recommended Care Processes are undertaken

#### Care Processes (NICE recommends all of these at least once a year)

**Blood Pressure** is a measurement of the force driving the blood through the arteries. Blood pressure readings contain two figures, e.g.130/80. The first is known as the systolic pressure which is produced when the heart contracts. The second is the diastolic pressure which is when the heart relaxes to refill with blood.

**BMI measurement** – Body Mass Index is calculated from weight and height and used to classify body weight as underweight, normal, overweight or obese.

**Serum creatinine** – this is a blood test used to measure kidney function.

**Urinary albumin** – this urine test detects the earliest stages of kidney disease.

**Cholesterol** - this blood test measures a type of fat that can damage blood vessels.

**Foot risk surveillance** - this examination checks the blood supply and sensation (feeling) in the feet. Loss of either is a risk for foot disease.

**Smoking Status** - this records whether the person is a smoker. Smoking increases the diabetic risk for heart attacks and stroke.

**HbA1c** – this is a blood test for average blood glucose levels during the previous two to three months.

#### Treatment Targets (NICE defines target levels to reduce risks of complications for people with diabetes)

**HbA1c** - the closer this is to normal (less than 42mmol/mol) the lower is the risk of all long term complications of diabetes.

**Cholesterol** – reducing cholesterol levels lowers the risk of heart attacks and strokes.

**Blood Pressure** – high levels are a risk for heart attacks and strokes; they also drive progression of eye and kidney disease.

**Primary prevention of CVD** – the prescription of statins for people with diabetes aged 40 to 80 years with no history of heart disease to reduce the risk of cardiovascular disease.

**Secondary prevention of CVD** – the prescription of statins for people with diabetes (any age) with a history of heart disease to reduce the risk of cardiovascular disease.

**Combined prevention of CVD** – the prescription of statins for people with diabetes that fall into either of the primary or secondary prevention groups.

#### Meeting all 3 treatment targets\* -

**Old** – having HbA1c ≤58mmol/mol, cholesterol <5mmol/L and blood pressure ≤140/80.

**New** – having HbA1c  $\leq$ 58mmol/mol, blood pressure  $\leq$ 140/80 and for people falling in the combined prevention CVD group: receiving statins.

\*For both measures, patients under 12 years of age are only required to meet the HbA1c target.

#### Prepared in collaboration with:







#### Supported by:



**The Healthcare Quality Improvement Partnership (HQIP)** is led by a consortium of the Academy of Medical Royal Colleges, the Royal College of Nursing, and National Voices. Its aim is to promote quality improvement in patient outcomes, and in particular, to increase the impact that clinical audit, outcome review programmes and registries have on healthcare quality in England and Wales. HQIP holds the contract to commission, manage, and develop the National Clinical Audit and Patient Outcomes Programme (NCAPOP), comprising around 40 projects covering care provided to people with a wide range of medical, surgical and mental health conditions. The programme is funded by NHS England, the Welsh Government and, with some individual projects, other devolved administrations, and crown dependencies. www.hqip.org.uk/national-programmes

**NHS Digital** is the trading name for the Health and Social Care Information Centre (HSCIC). NHS Digital managed the publication of the annual report.

**Diabetes UK** is the charity leading the fight against the most devastating and fastest growing health crisis of our time, creating a world where diabetes can do no harm.

The National Cardiovascular Intelligence Network (NCVIN) is a partnership of leading national cardiovascular organisations which analyses information and data and turns it into meaningful timely health intelligence for commissioners, policy makers, clinicians and health professionals to improve services and outcomes. National Diabetes Audit, 2019-20 Report 1: Care Processes and Treatment Targets

Published by NHS Digital Part of the Government Statistical Service

For further information <u>https://digital.nhs.uk</u> 0300 303 5678 <u>enquiries@nhsdigital.nhs.uk</u>



Copyright © 2021 Healthcare Quality Improvement Partnership (HQIP). All rights reserved. NHS Digital is the trading name of the Health and Social Care Information Centre.

This work may be re-used by NHS and government organisations without permission.