National Diabetes Audit, 2020-21
Report 1: Care Processes and Treatment Targets

England and Wales

14 July 2022

Annual Report

Information and technology
for better health and care

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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 2020-21 data release was published in December 2021.

GP practice and specialist service level information accompanies this report and can be found here.

* National Institute for Health and Care Excellence

Executive Summary: Audit Participation

Primary care participation stood at 99.3% in 2020-21 in England and Wales.

In all but 6 English Clinical Commissioning Groups (CCGs) and Local Health Boards (LHBs) (107 of 113), GP practice participation was 95% and over. Participation did not fall below 88% in any CCG/LHB.

108* specialist services participated in 2020-21 in England**.

- 51 services submitted both the NDA core dataset and the insulin pump dataset
- 9 services submitted only the insulin pump dataset
- 48 services submitted only the NDA core dataset

Altogether, there are 138 NHS Acute Trusts in England, some of which have more than 1 hospital providing specialist diabetes care. 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 2020-21 by CCG and LHB please see the participation summary accompanying this report here.

* One of the services had only a small number of adults with type 2 diabetes so is not included in this report ** 4 Welsh specialist services from 2 LHBs submitted insulin pump data to the NDA.

Executive Summary: Key Findings

Background

This report describes the national picture regarding completion of NICE recommended annual care processes, and achievement of NICE recommended treatment targets, in people with diabetes living in England and Wales during 2020-21. Local data should be accessed via the accompanying dashboard.

Key Finding 1

During the COVID-19 pandemic, care process completion declined everywhere but there was greater geographical variation than usual. The greatest impacts were on foot examination, weight measurement, and retinal screening. Urine albumin checks remain lowest.

Key Finding 2

During the COVID-19 pandemic: glucose control improved in people with type 1 diabetes but deteriorated in those with type 2 and other types of diabetes; blood pressure deteriorated in all; and use of statins was relatively unchanged.

Key Finding 3

2.0% of people with type 1 diabetes and 5.3% of people with type 2 or other types of diabetes have severe frailty. 65,970 people with type 2 diabetes have both severe frailty and HbA1c ≤ 53 mmol/mol. 18,690 people with diabetes with severe frailty and HbA1c ≤ 53mmol/mol are on insulin or sulphonylurea or both. These people may be at particular risk of harm due to hypoglycaemia.

Executive Summary: Key Recommendations

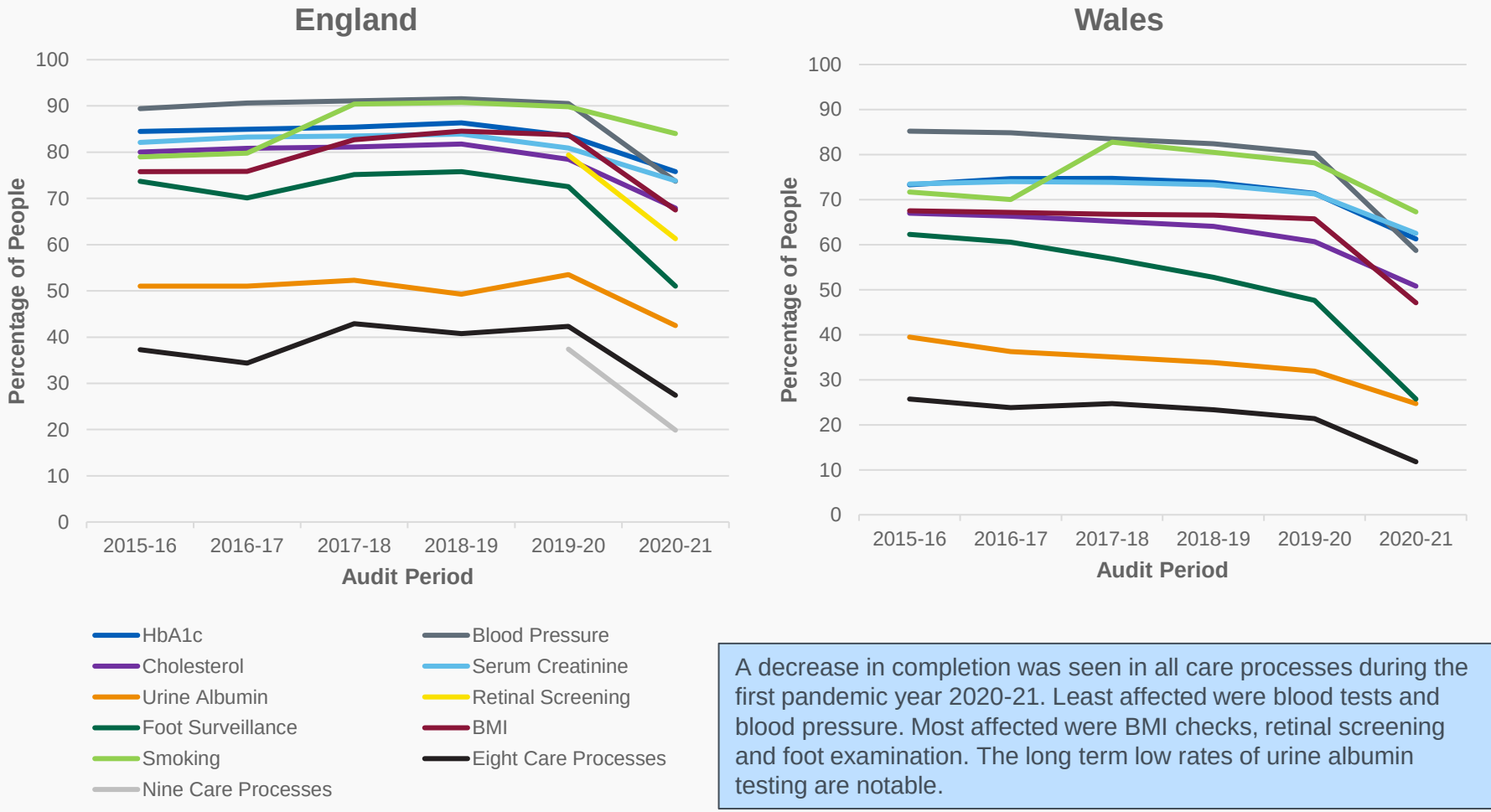
1. Diabetes care providers and local systems should restore routine diabetes review (9 annual care processes) and work to reduce geographic variation. The data dashboard for 2020-21 and quarterly data releases can be used for benchmarking and tracking progress.
2. Diabetes care providers and local systems should work with people who have type 2 and other types of diabetes to help them achieve individualised targets for blood glucose and blood pressure control. For people with type 1 diabetes they should build on the 2020-21 improvement in glucose control as per recommendations in the NDA Type 1 report and improve achievement of blood pressure control.
3. General practices should identify the small number of people with type 2 or other diabetes and severe frailty, who are treated with sulphonlyureas and/or insulin, and have evidence for low average glucose levels (HbA1c ≤ 53 mmol/mol) and consider de-intensification of glucose-lowering treatment.

National Diabetes Audit 2020-21

Care Processes and Treatment Targets: National Summary, 2015-21

Care Processes: Type 1 by Country, 2015-21

Figure 1: Percentage of people with type 1 diabetes receiving NICE recommended care processes*, by audit year and country,** 2015-16 to 2020-21



A decrease in completion was seen in all care processes during the first pandemic year 2020-21. Least affected were blood tests and blood pressure. Most affected were BMI checks, retinal screening and foot examination. The long term low rates of urine albumin testing are notable.

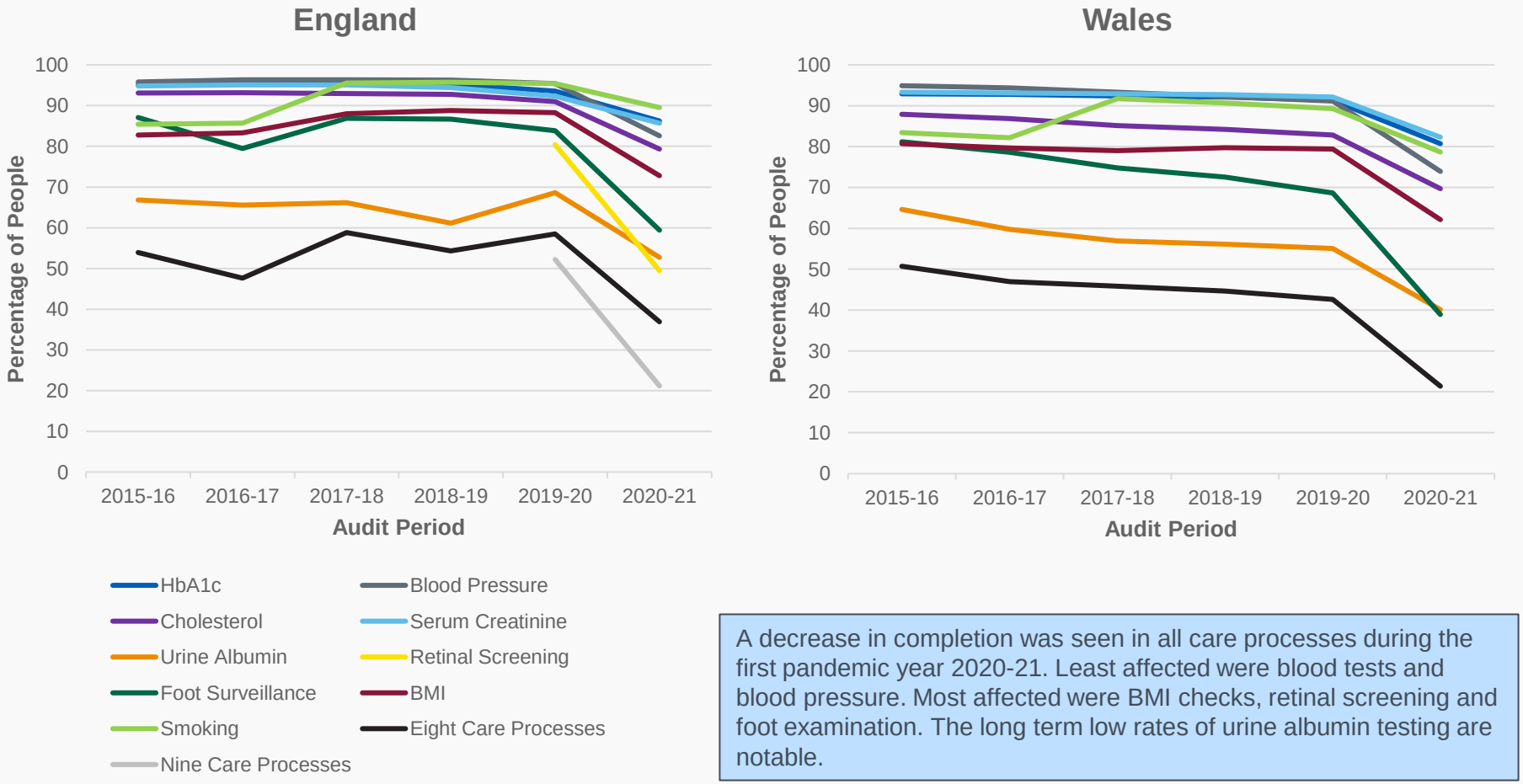
Data tables for these charts can be found in the Additional Information section.

* 9 care processes includes retinal screening data, which we currently do not receive for Wales, meaning that Wales can only currently achieve completion of the NICE recommended 8 care processes in the NDA data

** For the 9 care processes in England, there is to be a move to alternate year retinal screening for those known not to have retinopathy for the past 2 screening occasions. This was implemented to some extent early during the pandemic, in order to deal with the reduced screening capacity.

Care Processes: Type 2 by Country, 2015-21

Figure 2: Percentage of people with type 2 and other diabetes* receiving NICE recommended care processes**,*** by audit year and country, 2015-16 to 2020-21



A decrease in completion was seen in all care processes during the first pandemic year 2020-21. Least affected were blood tests and blood pressure. Most affected were BMI checks, retinal screening and foot examination. The long term low rates of urine albumin testing are notable.

Data tables for these charts can be found in the Additional Information section.

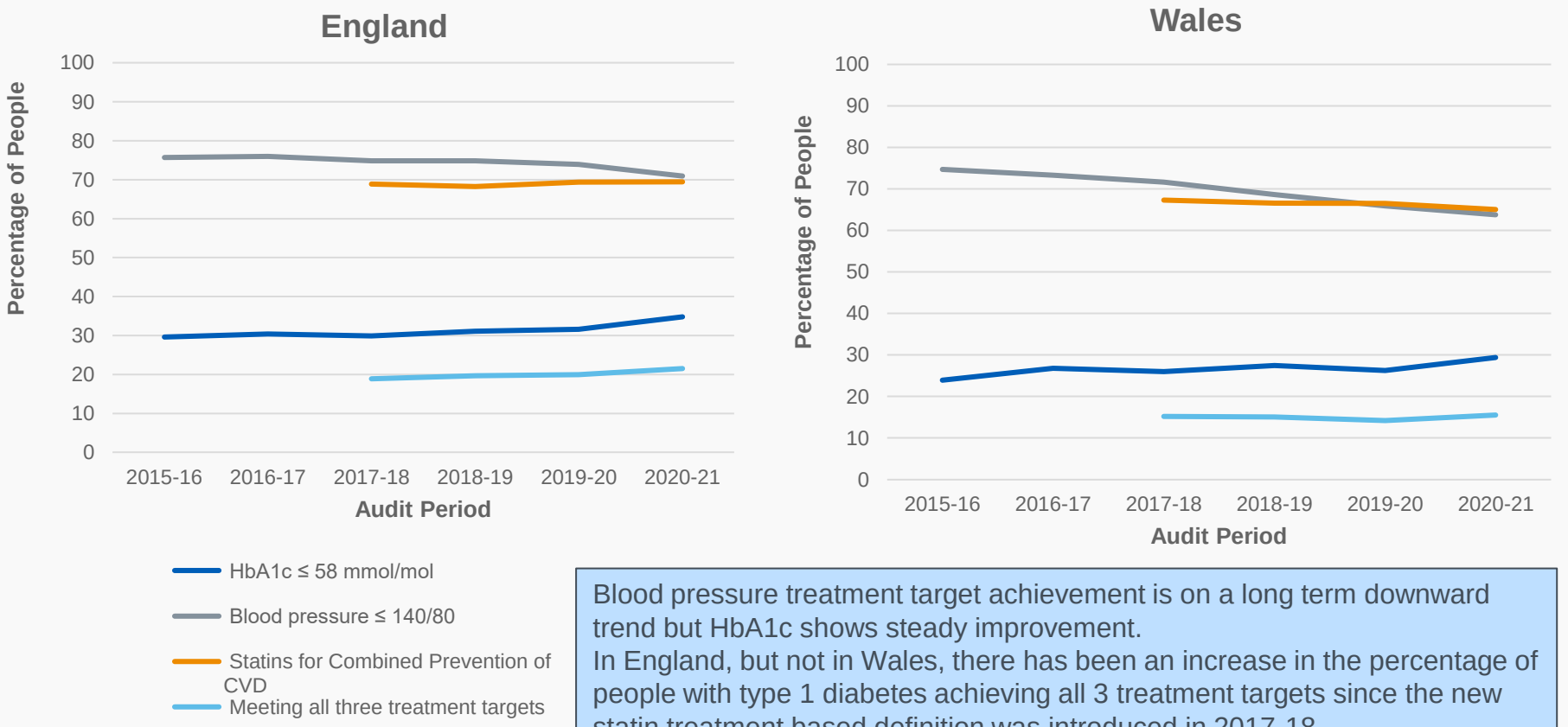
* See the Definitions Section for the definition of 'Type 2 and other diabetes'

** 9 care processes includes Retinal Screening data, which we currently do not receive for Wales, meaning that Wales can only currently achieve completion of the NICE recommended 8 care processes in the NDA data

*** For the 9 care processes in England, there is to be a move to alternate year retinal screening for those known not to have retinopathy for the past 2 screening occasions. This was implemented to some extent early during the pandemic, in order to deal with the reduced screening capacity.

Treatment Targets: Type 1 by Country, 2015-21

Figure 3: Percentage of people with type 1 diabetes achieving their treatment targets*, by audit year and country**, 2015-16 to 2020-21

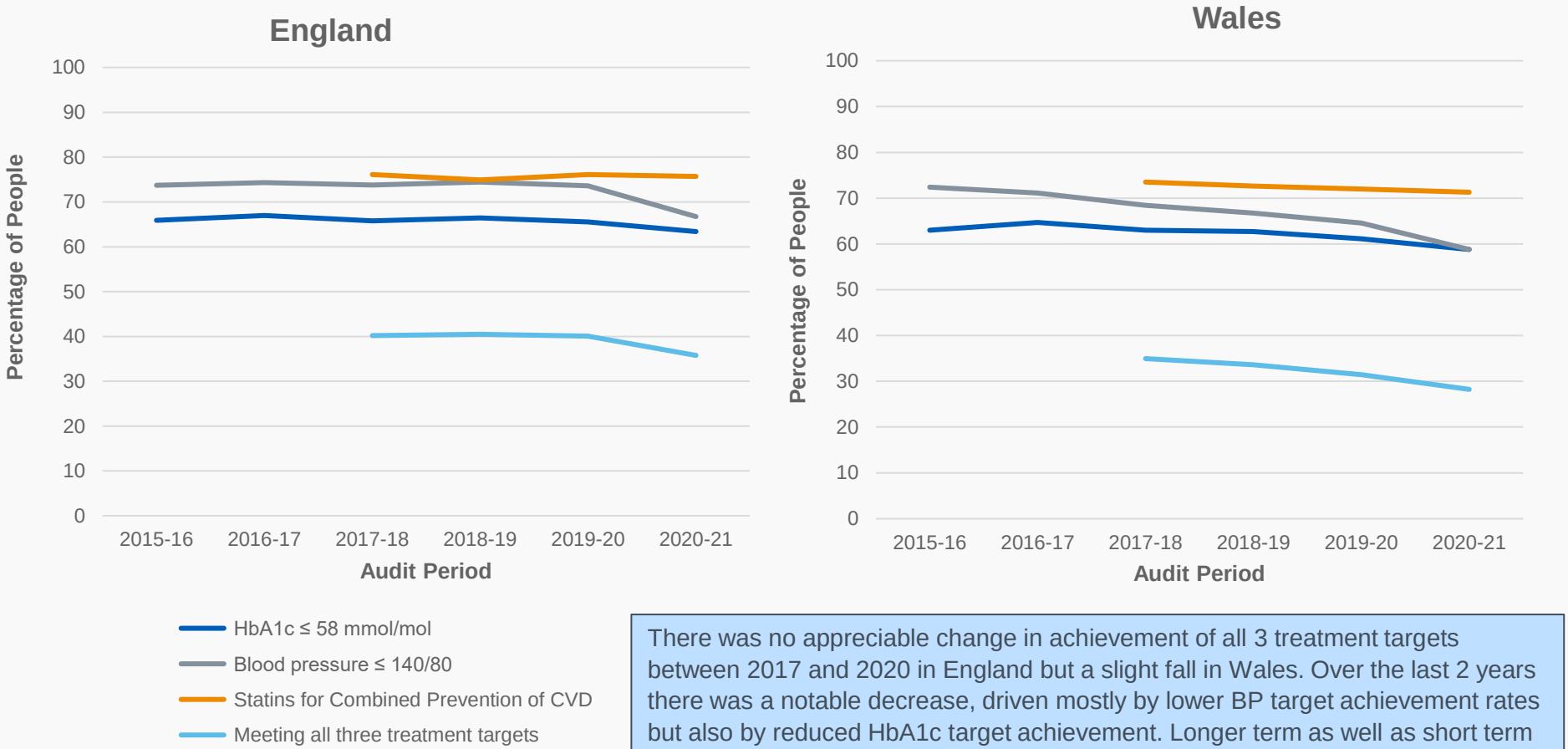


Blood pressure treatment target achievement is on a long term downward trend but HbA1c shows steady improvement.
In England, but not in Wales, there has been an increase in the percentage of people with type 1 diabetes achieving all 3 treatment targets since the new statin treatment based definition was introduced in 2017-18.

* Meeting All 3 Treatment Targets are defined in the Definitions Section
** Drug data to allow us to record combined prevention of CVD (cardiovascular disease) was only available from 2017/18
Data tables for these charts can be found in the Additional Information section

Treatment Targets: Type 2 by Country, 2015-21

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



There was no appreciable change in achievement of all 3 treatment targets between 2017 and 2020 in England but a slight fall in Wales. Over the last 2 years there was a notable decrease, driven mostly by lower BP target achievement rates but also by reduced HbA1c target achievement. Longer term as well as short term (pandemic related) trends are evident.

*Meeting All 3 Treatment Targets are defined in the Definitions Section
Data table for these charts can be found in the Additional Information section.

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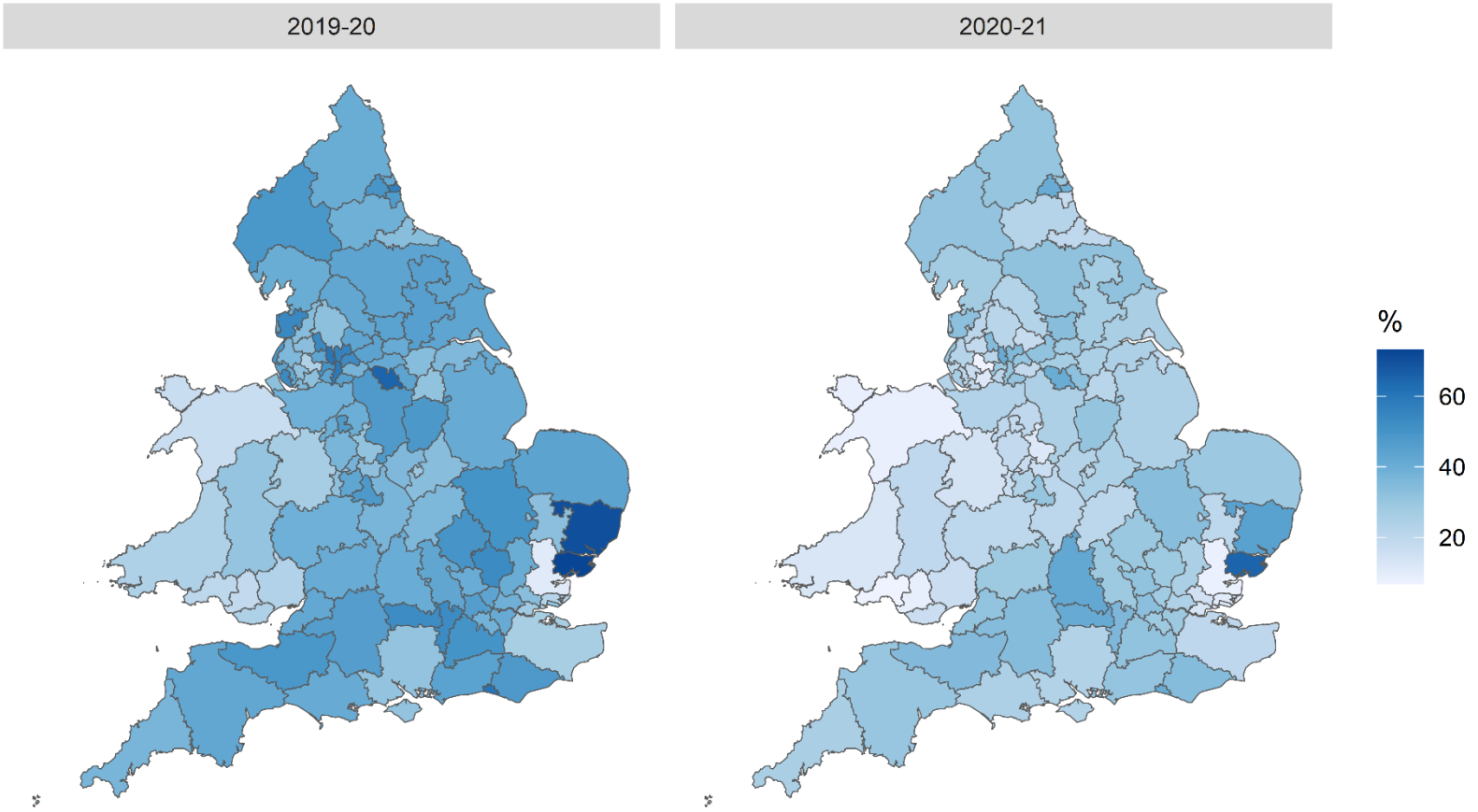
Care Processes and Treatment Targets: Variation by CCG/LHB, 2020-21

Care Processes: CCG/LHB Variation, Mapped

Figure 5: The range of CCG/LHB 8 care process completion* for people with type 1 diabetes, England and Wales, 2019-20 and 2020-21

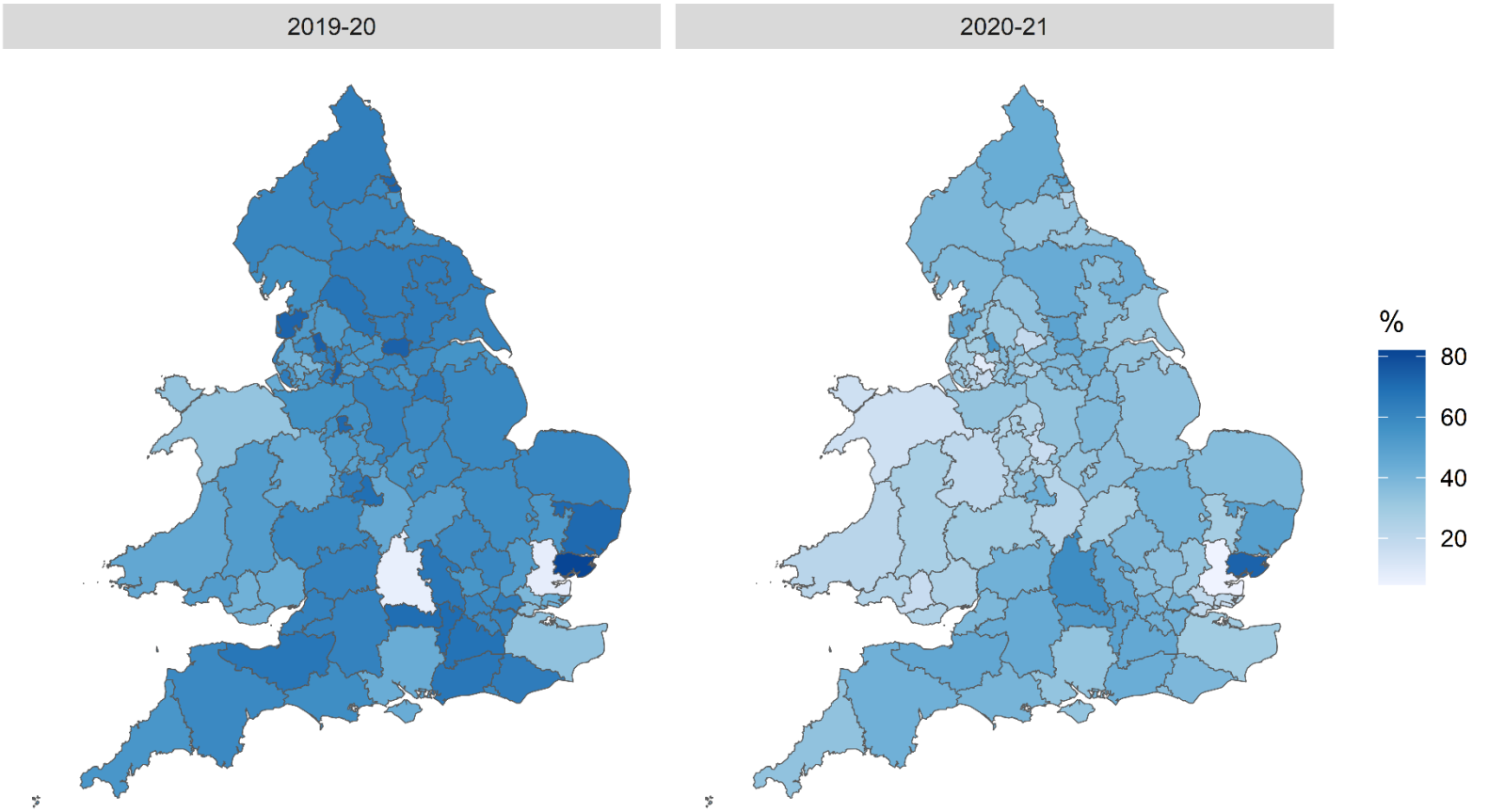


For continuity with previous reports, and to avoid inappropriate comparisons between England (retinal screening data available) and Wales (retinal screening data not available), these maps illustrate the substantial geographical variation in completion of the eight NICE-recommended care processes.

* There is an existing clinical coding issue due to changes in NDA data extraction, resulting in a significant reduction in care process completion – this issue only still exists in Mid Essex CCG and is evident in the map above. This is currently under investigation and will be resolved for 2021-22.

Care Processes: CCG/LHB Variation, Mapped

Figure 6: The range of CCG/LHB 8 care process completion* for people with type 2 and other diabetes, England and Wales, 2019-20 and 2020-21



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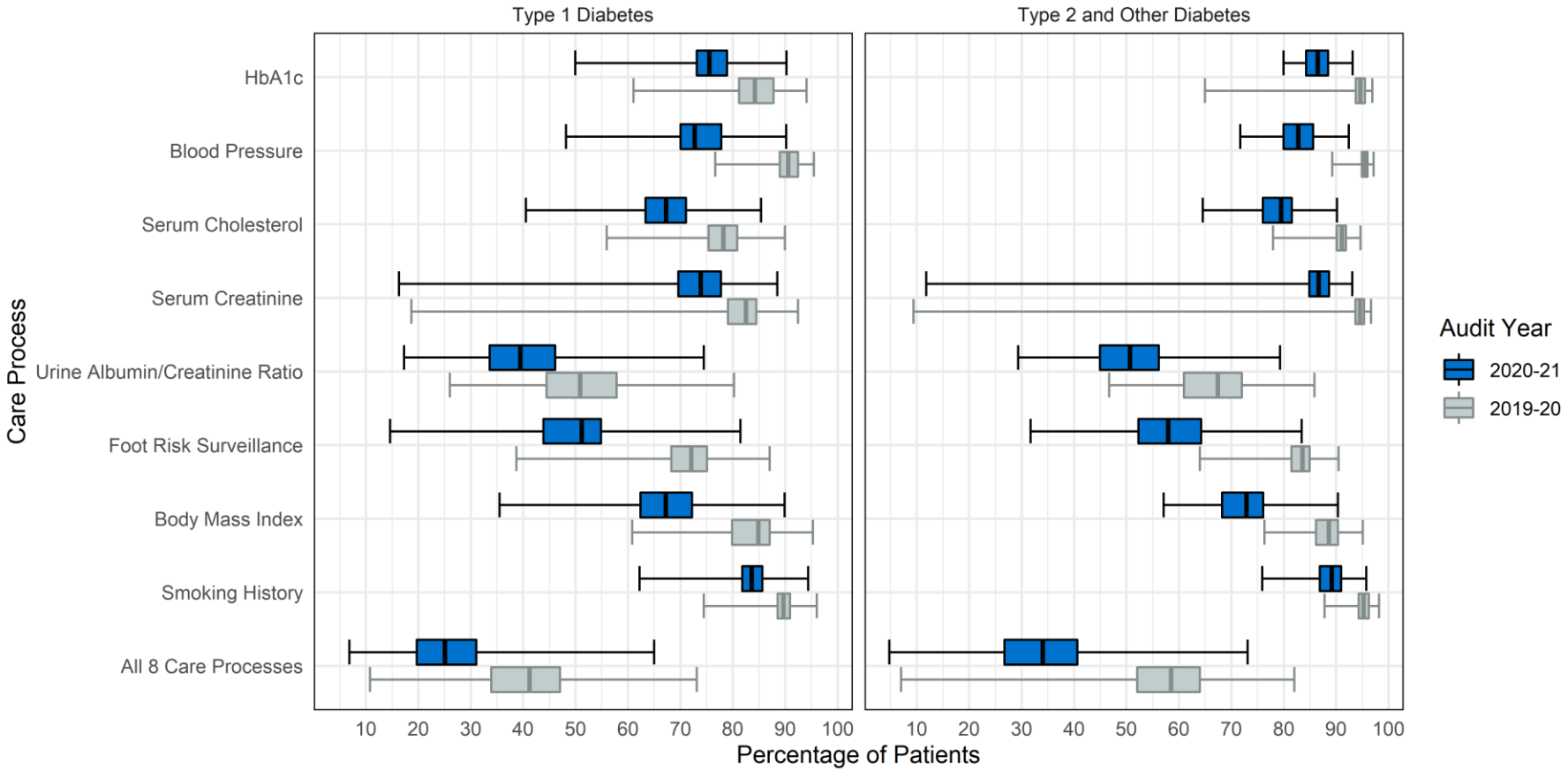
Care Processes: CCG/LHB Variation, Range

Figure 7: The range of CCG/LHB care process completion*,,** England and Wales, 2019-20 and 2020-21



The median values in these 'box and whiskers' plots*** show the pandemic related deteriorations illustrated in earlier slides. They show also that the range of variation increased during 2020-21, most notably for BMI, blood pressure and foot checks.

GP practice and specialist service level information accompanies this report.

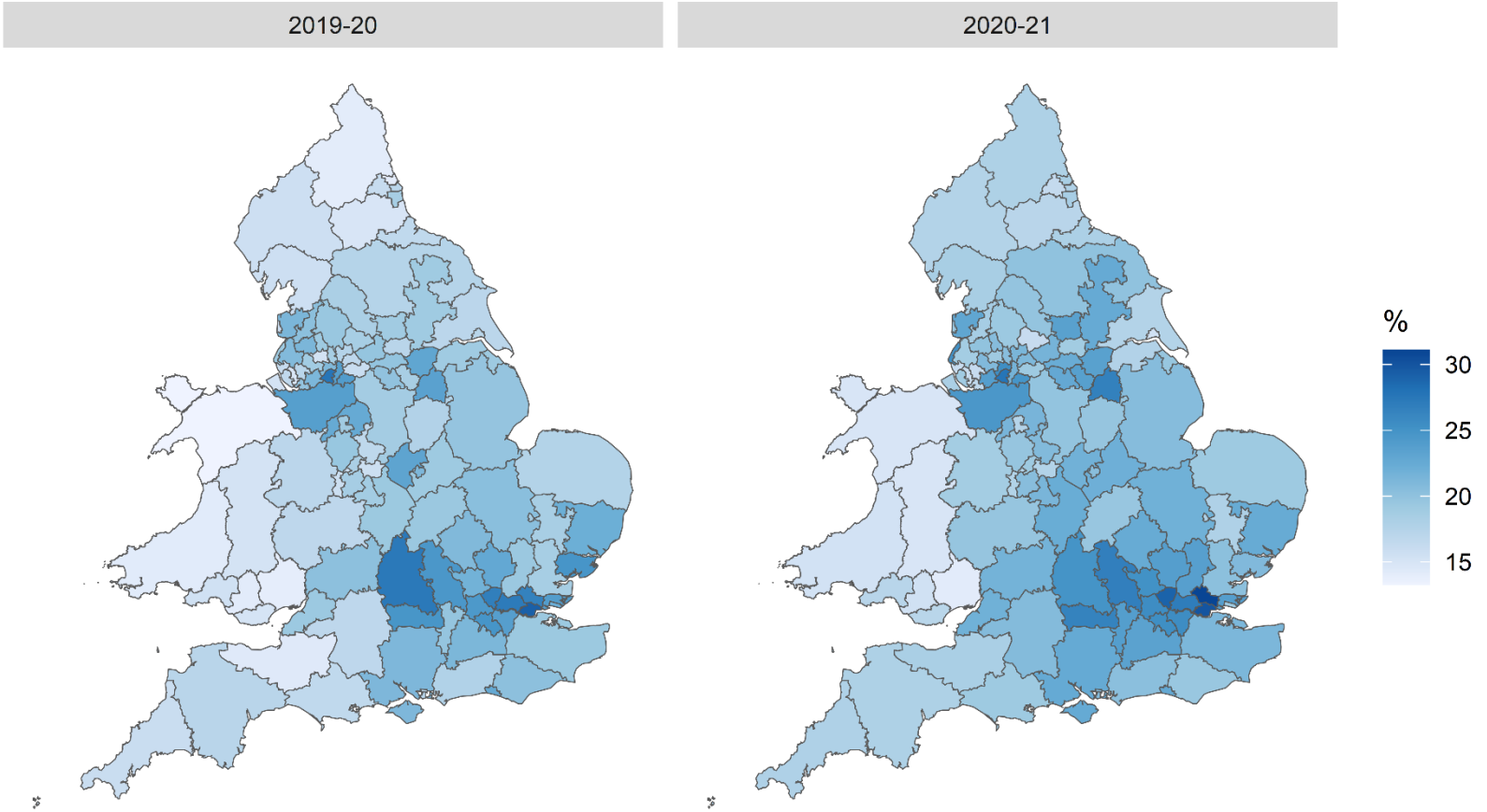
* In the benchmarking tables, care process completion rates are presented with case-mix adjusted bandings that show whether a service is achieving the care process delivery levels expected for their patient population. The bandings take into account age, gender, ethnicity, duration of diabetes and social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

** There is an existing clinical coding issue due to changes in NDA data extraction, resulting in a significant reduction in care process completion – this issue is still evident above in Serum Creatinine care process completion. This is currently under investigation and will be resolved for 2021-22.

*** See the Definitions Section for a visual guide to reading box and whisker plots

Treatment Targets: CCG/LHB Variation, Mapped

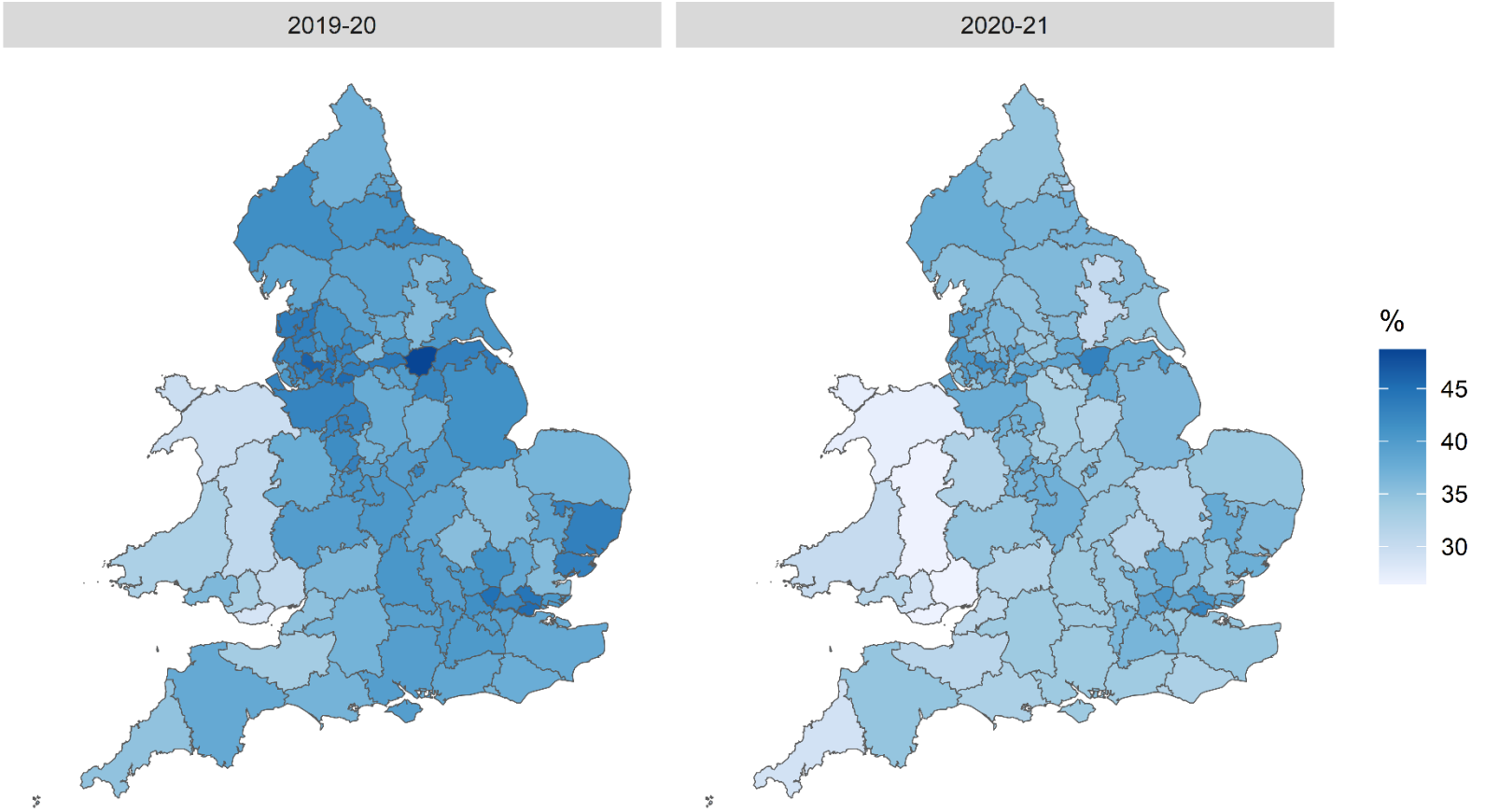
Figure 8: The range of CCG/LHB 3 treatment target achievement for people with type 1 diabetes, England and Wales, 2019-20 and 2020-21



The 3 treatment targets, consistent with NICE guidance, are: HbA1c ≤ 58mmol/mol (7.5%), blood pressure ≤ 140/80, and prescribed a statin for primary (age 40-80yr) or secondary (established cardiovascular disease) prevention.

Treatment Targets: CCG/LHB Variation, Mapped

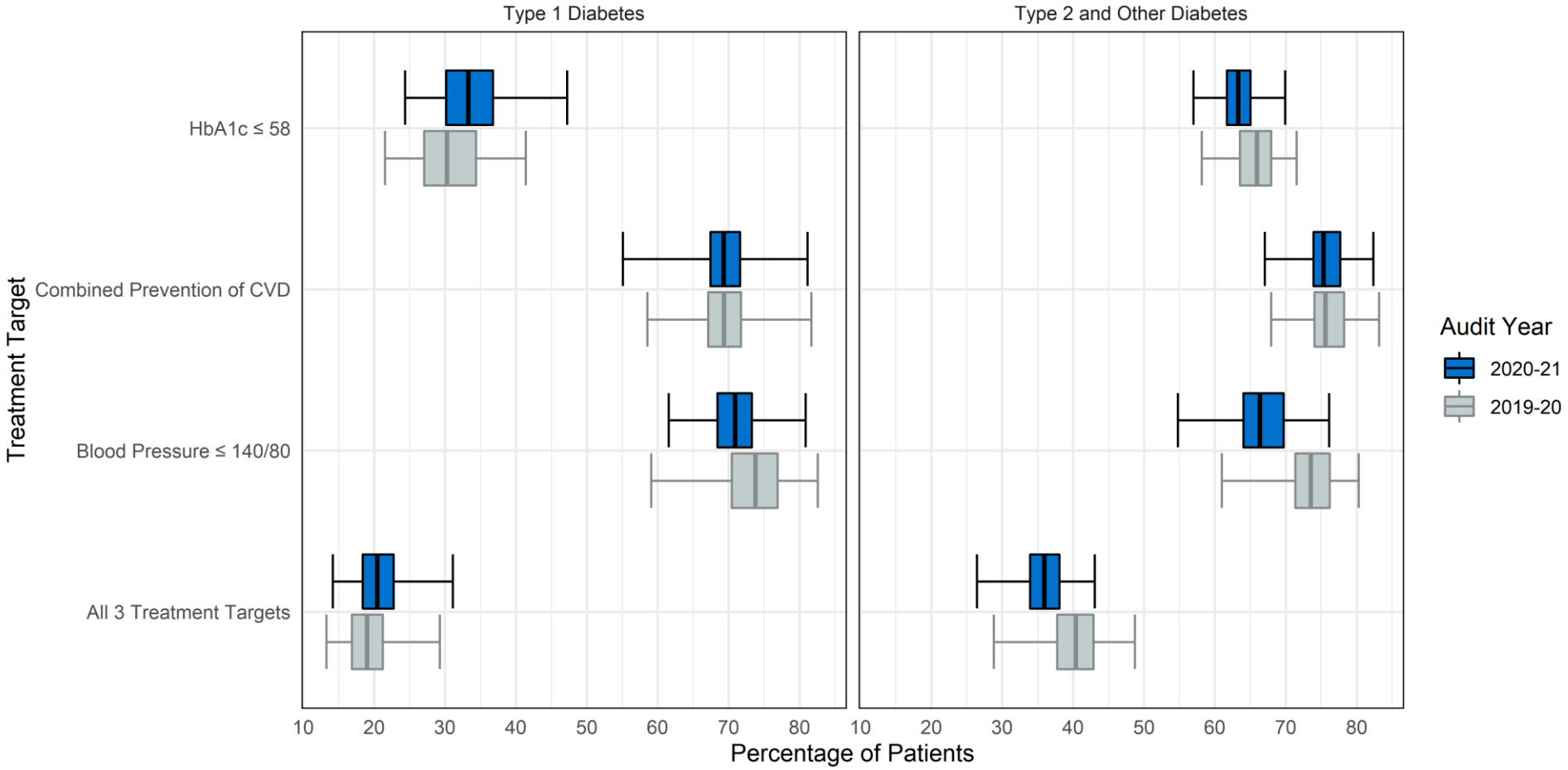
Figure 9: The range of CCG/LHB 3 treatment target achievement for people with type 2 and other diabetes, England and Wales, 2019-20 and 2020-21



The 3 treatment targets, consistent with NICE guidance, are: HbA1c ≤ 58mmol/mol (7.5%), blood pressure ≤ 140/80, and prescribed a statin for primary (age 40-80yr) or secondary (established cardiovascular disease) prevention.

Treatment Targets: CCG/LHB Variation, Range

Figure 10: The range of CCG/LHB treatment target achievement, England and Wales, 2019-20 and 2020-21



The median values in these 'box and whiskers' plots* show the pandemic related changes illustrated in earlier slides. They show also that in contrast to care processes the range of variation was similar during 2020-21. The whole population shifts in HbA1c and blood pressure may suggest that changes in behaviour rather than service delivery may be dominant here.

GP practice and specialist service level information accompanies this report - http://www.digital.nhs.uk/pubs/ndauditcorerep2021
Treatment target achievement forms 1 of the oversight metrics in the NHS Oversight Framework 2021-22
See the accompanying methodology document for full details on demographic modelling - http://www.digital.nhs.uk/pubs/ndauditcorerep2021
* See the Definitions Section for a visual guide to reading box and whisker plots

CCG/LHB Success – What can we learn?

CCGs with the best results during 2020-21 have been identified and asked if they had any tips to share. The method was to rank all CCGs/LHBs by calculating the differences between the Care Process completion or Treatment Target achievement rates predicted by the logistic regression models* and their actual measured rates.

The CCGs with the greatest positive differences were:

All 8 Care Processes (ranked 1st and 2nd for both type 1 and type 2 and other):

- **NHS North East Essex CCG**
- **NHS Bury CCG**

All 3 Treatment Targets:

- **NHS Thurrock CCG (**1st **for type 1 and type 2)**
- **NHS Basildon and Brentwood CCG (**2nd **for type 1)**
- **NHS Doncaster CCG (**2nd **for type 2)**

* The methodology behind the logistic regression models is published here.

Routine diabetes care ‘Success Factors’ identified by top performing CCGs in 2020-21

“**A strong, positive culture throughout the pandemic** of working with practices, PCN* clinical directors and LMC** in partnership rather than in hierarchy; it may be that the general collaborative and flexible approach has allowed practices to restart earlier/keep chronic disease reviews going for longer than in other areas”

“**Strong leadership, empowered team, patient engagement & partner organisations working together** continually looking to develop services to improve patient care. No ivory tower!”

“**One single pathway/team across Primary, Community and Acute care** with a single budget managed by the team”

* PCN = Primary Care Network
** LMC = Local Medical Committee

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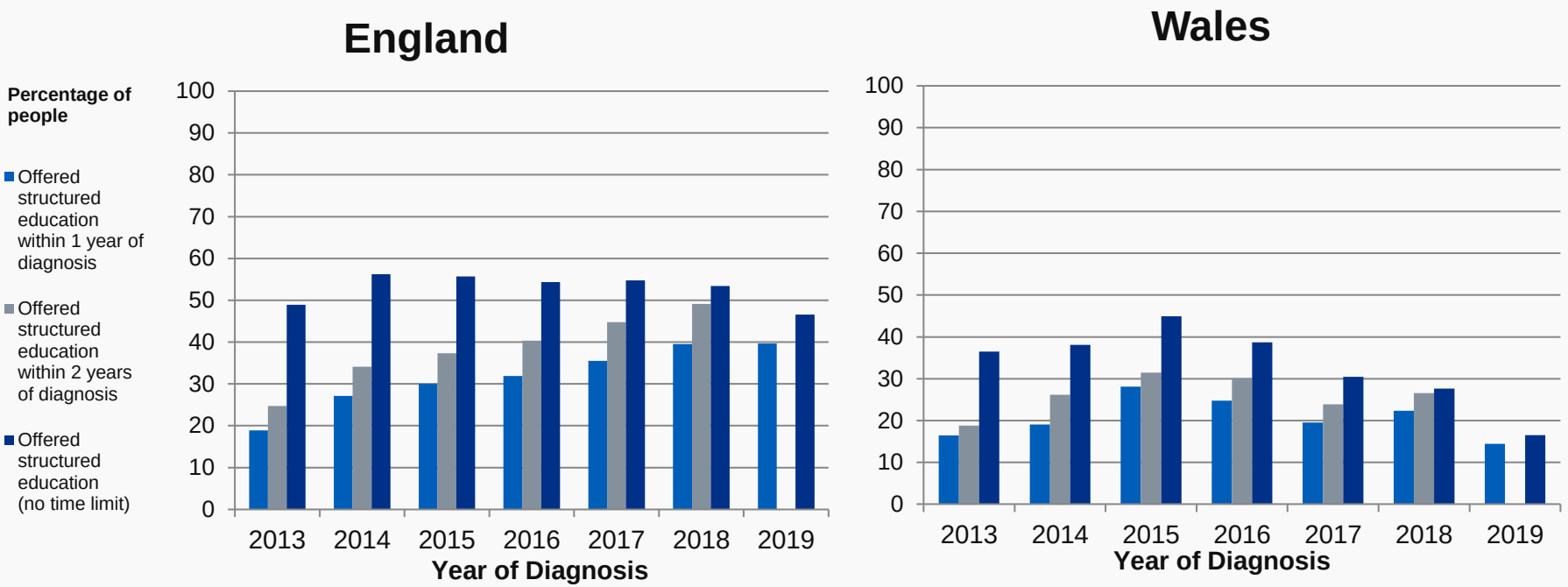
What percentage of people registered as having diabetes are offered and attend a structured education course?

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, 2020-21*



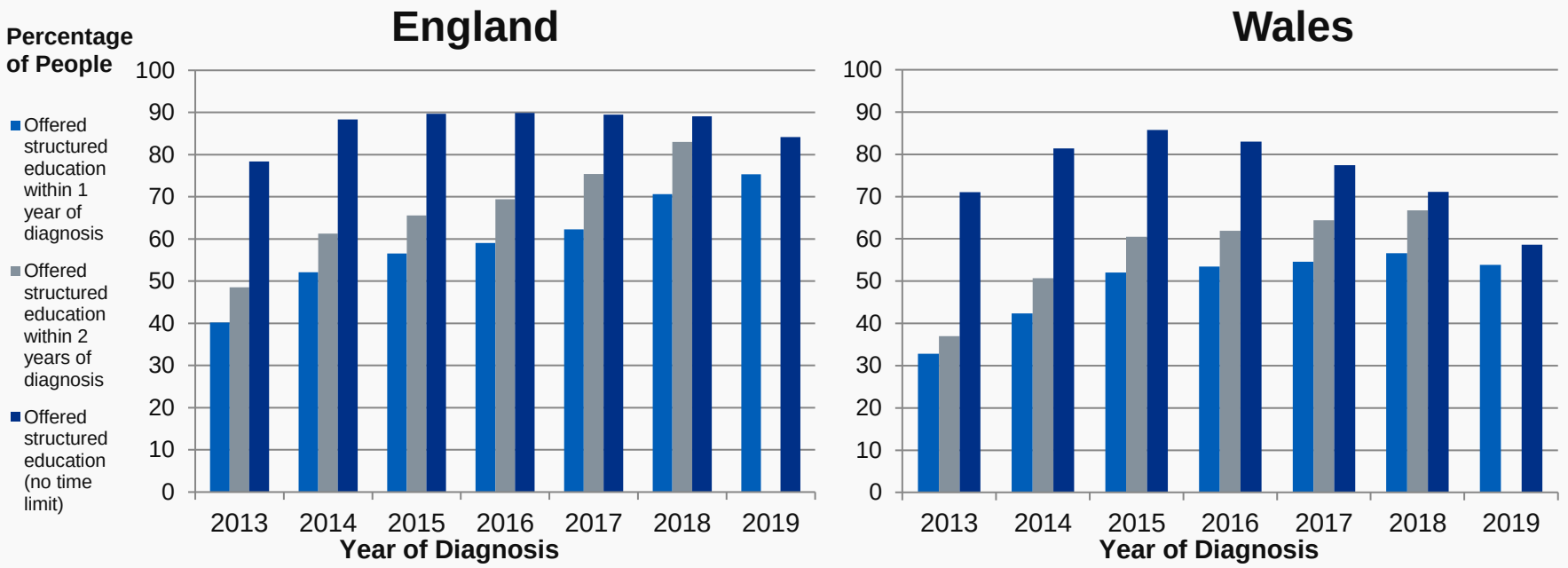
In England and Wales, recorded offers of structured education, with no time limit, decreased for those diagnosed in 2019. This may be a result of the COVID-19 pandemic.

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 2019 – this is because the 2020-21 NDA data (latest audit period) ends in March 2021, meaning that anyone diagnosed after March 2019 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, 2020-21*



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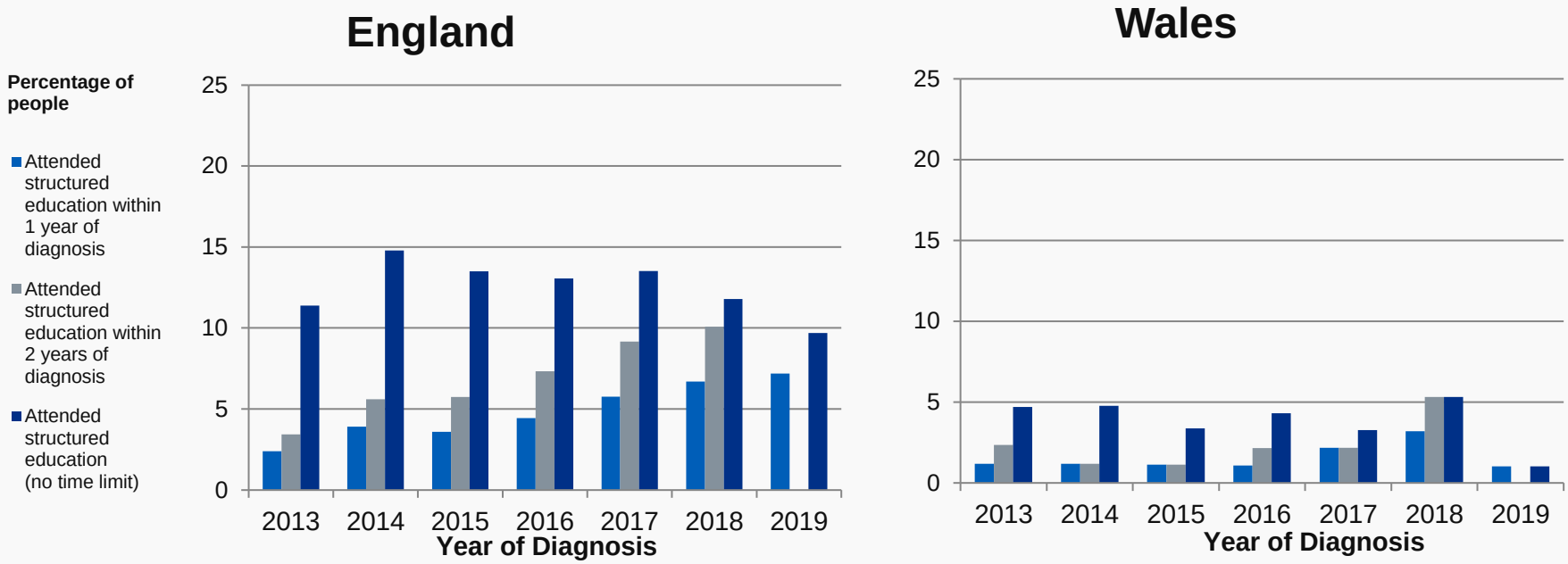
Structured Education: Attended – Type 1

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, 2020-21*

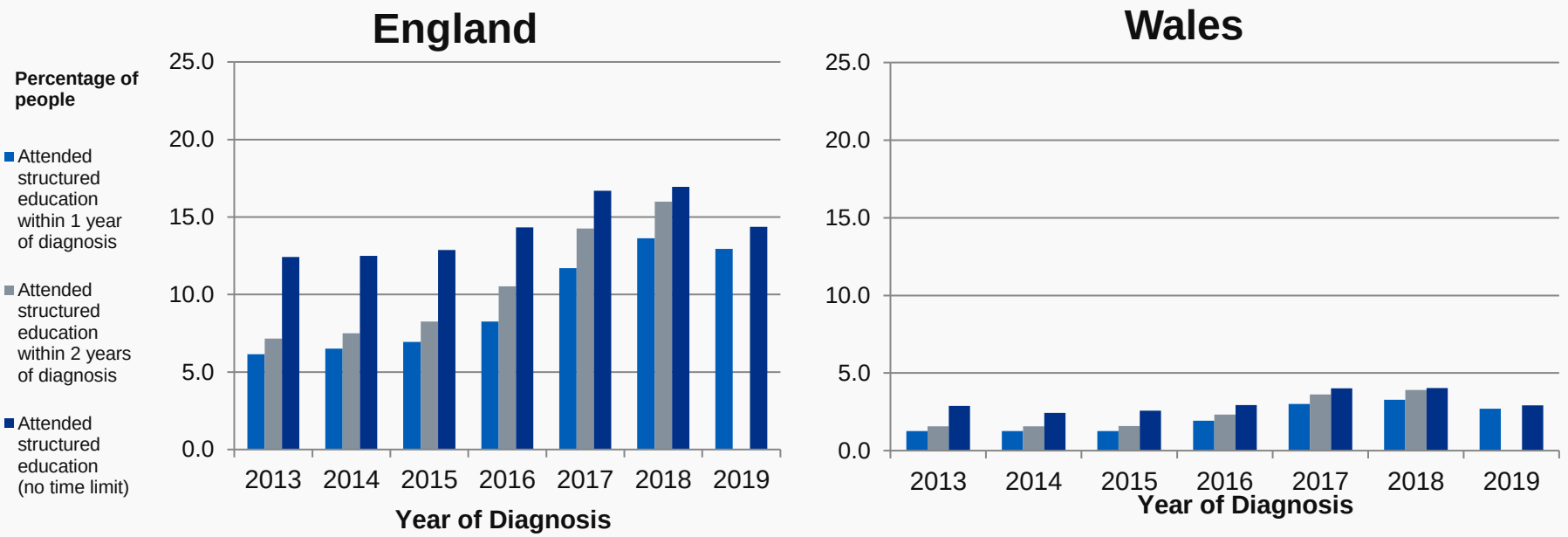


It is believed that poor recording means that the apparently low rates of attendance at a structured education programme are an underestimation. In England, recorded attendance rates within one year of diagnosis in 2019 have increased, and in Wales they have decreased.

* 'Attended structured education within 2 years of diagnosis' data is not reported for people diagnosed with diabetes in 2019 – this is because the 2020-21 NDA data (latest audit period) ends in March 2021, meaning that anyone diagnosed after March 2019 would not have the full 2 year opportunity to attend structured education. Attendance at structured education forms one of the indicators in the CCG improvement and assessment framework 2018-19.

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, 2020-21*



It is believed that poor recording means that the apparently low rates of attendance at a structured education programme are an underestimation. In England and Wales, recorded attendance rates within two years have increased, and attendance rates within 1 year and with no time limit have decreased.

* 'Attended structured education within 2 years of diagnosis' data is not reported for people diagnosed with diabetes in 2019 – this is because the 2020-21 NDA data (latest audit period) ends in March 2021, meaning that anyone diagnosed after March 2019 would not have the full 2 year opportunity to attend structured education. Attendance at structured education forms one of the indicators in the CCG improvement and assessment framework 2018-19.

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How do frailty, learning disabilities, and severe mental illness affect diabetes care?

Frailty

Table 1: People with severe frailty or low HbA1c or both by diabetes type

Diabetes Type	Number of People with a Valid HbA1c Reading	Percentage with Severe Frailty	Percentage with HbA1c ≤ 53mmol/mol	Percentage with HbA1c ≤ 53 and Severe Frailty
Type 1	205,260	2.0%	21.7%	0.4%
Type 2 or Other	2,920,710	5.3%	49.8%	2.9%

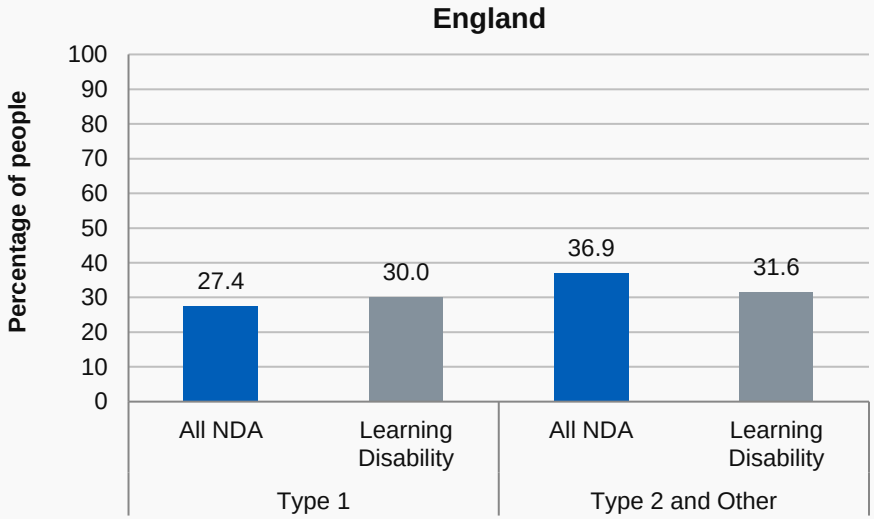
Table 2: People with type 2 or other diabetes that are recorded as severely frail or have low HbA1c or both, by prescription of insulin or sulphonylureas or both

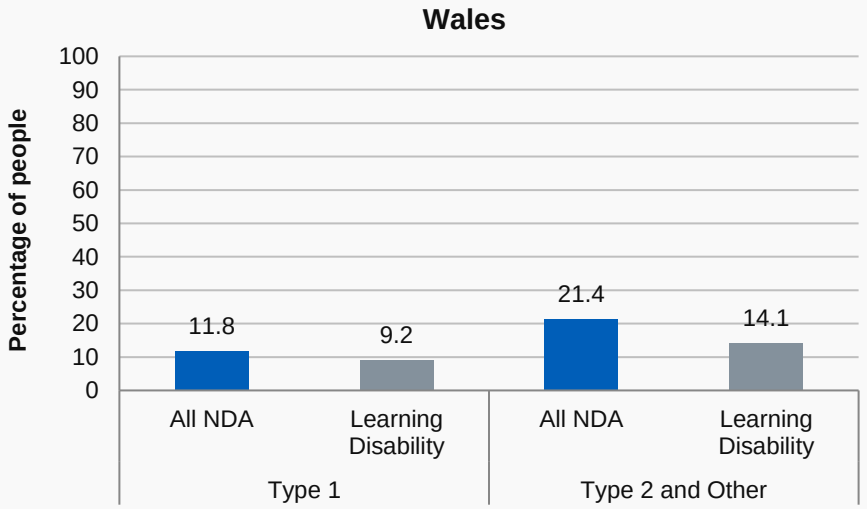
Drugs Prescribed	Number of People with a Valid HbA1c Reading	Percentage with Severe Frailty	Percentage with HbA1c ≤ 53mmol/mol	Percentage with HbA1c ≤ 53 and Severe Frailty
Insulin	409,020	9.2%	21.7%	2.0%
Sulphonylurea	571,420	5.0%	49.8%	1.5%
Both	80,210	8.0%	18.0%	1.2%

- **Key finding:** 18,690 people with type 2 diabetes with severe frailty and HbA1c ≤ 53mmol/mol are on insulin or sulphonylurea or both.
- The electronic Frailty Index (eFI) has been autogenerated by GP Electronic Records for several years. It is included in the 2020-21 NDA dataset for the first time. It has 3 grades: mild, moderate and severe.
- Frailty describes a dynamic state of increased vulnerability to adverse health outcomes resulting from loss of physiological reserve. The prevalence of frailty increases with increasing age. However, frailty is not universal among older people (aged 65+ years), and can also be identified in younger people (aged <65 years), particularly in the context of long-term conditions, including diabetes.
- Severe hypoglycaemia (blood glucose level ≤2.2mmol/l) is always hazardous but the hazard, including death, is amplified by cardiovascular co-morbidities and poor resilience.
- Severe hypoglycaemia is only possible if a drug is being used that can push glucose levels into the subnormal range (<3.5mmol/l) and is more likely if average glucose levels are low (HbA1c<=53). The drugs used in type 2 diabetes management that can cause hypoglycaemia are sulphonylureas and insulin.
- People with frailty have reduced life-expectancy so are unlikely to live long enough to benefit from near normal blood glucose levels and are at increased risk from hypoglycaemia. NICE therefore recommends relaxing target HbA1c levels in people who are frail (https://www.nice.org.uk/guidance/ng28/chapter/Recommendations#blood-glucose-management)

Learning Disability and Care Process Completion

Figure 15: Percentage of people with diabetes receiving the 8 NICE recommended care processes by diabetes type, learning disability diagnosis and country, standardised by age and sex, 2020-21



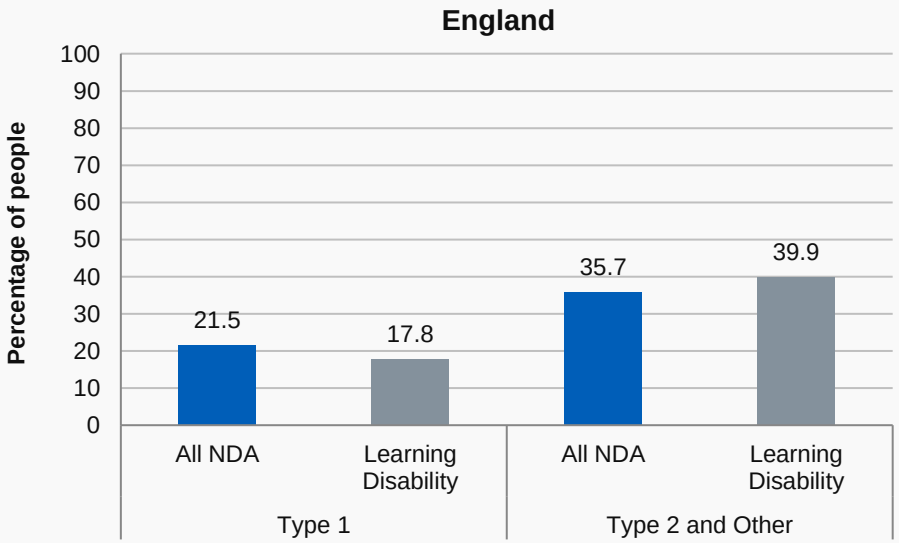


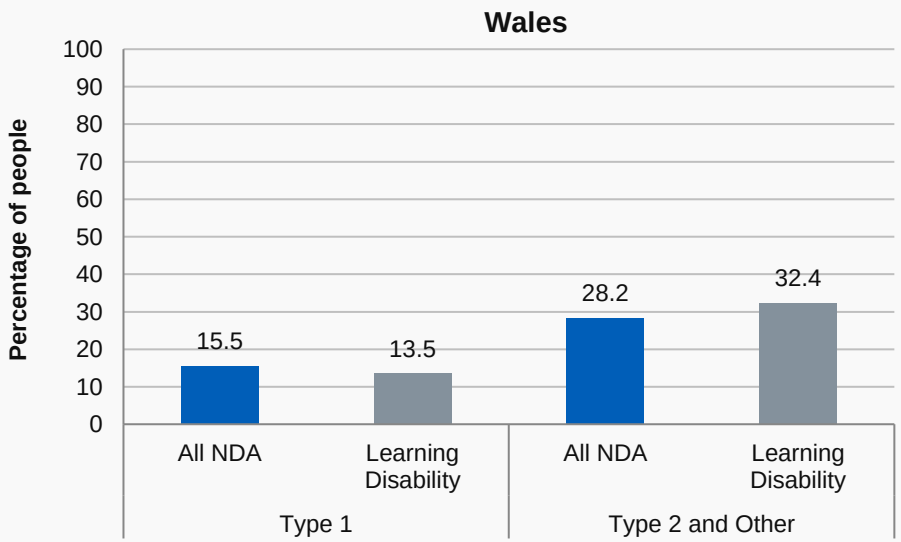
For people with type 1 diabetes, those with a learning disability are less likely to have received all 8 care processes in Wales, but more likely to receive all 8 care processes in England.

For people with type 2 or other diabetes, those with a learning disability are less likely to have received all 8 care processes.

Learning Disability and Treatment Target Achievement

Figure 16: Percentage of people with diabetes achieving all 3 treatment targets by diabetes type, learning disability diagnosis and country, standardised by age and sex, 2020-21



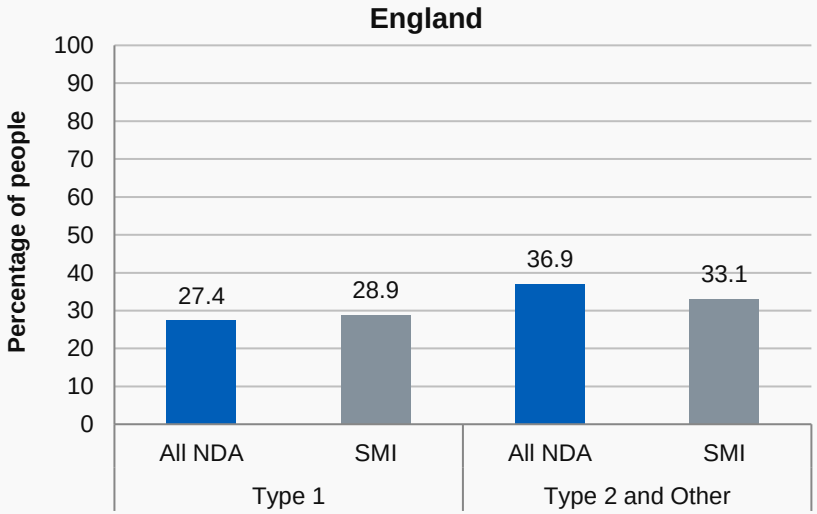


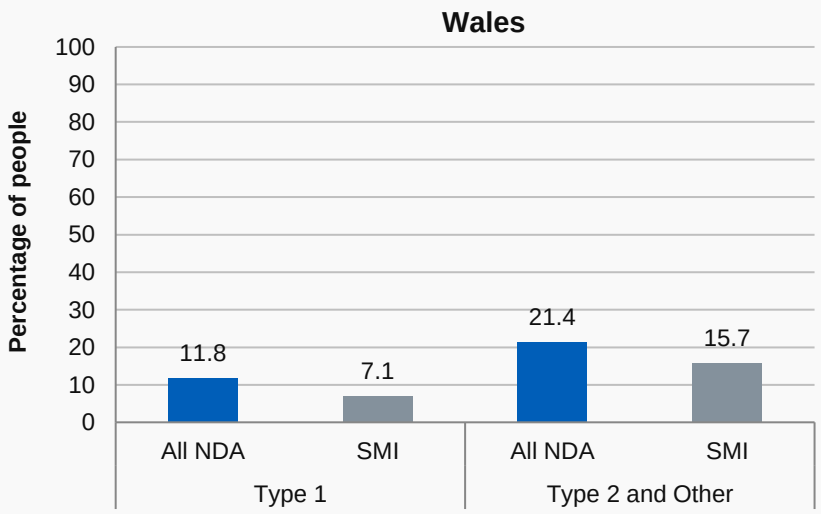
For people with type 1 diabetes in both England and Wales, those with a learning disability are less likely to have achieved all three treatment targets.

The opposite is observed for people with type 2 and other diabetes.

Severe Mental Illness (SMI) and Care Process Completion

Figure 17: Percentage of people with diabetes receiving 8 NICE recommended care processes by diabetes type, SMI diagnosis and country, 2020-21



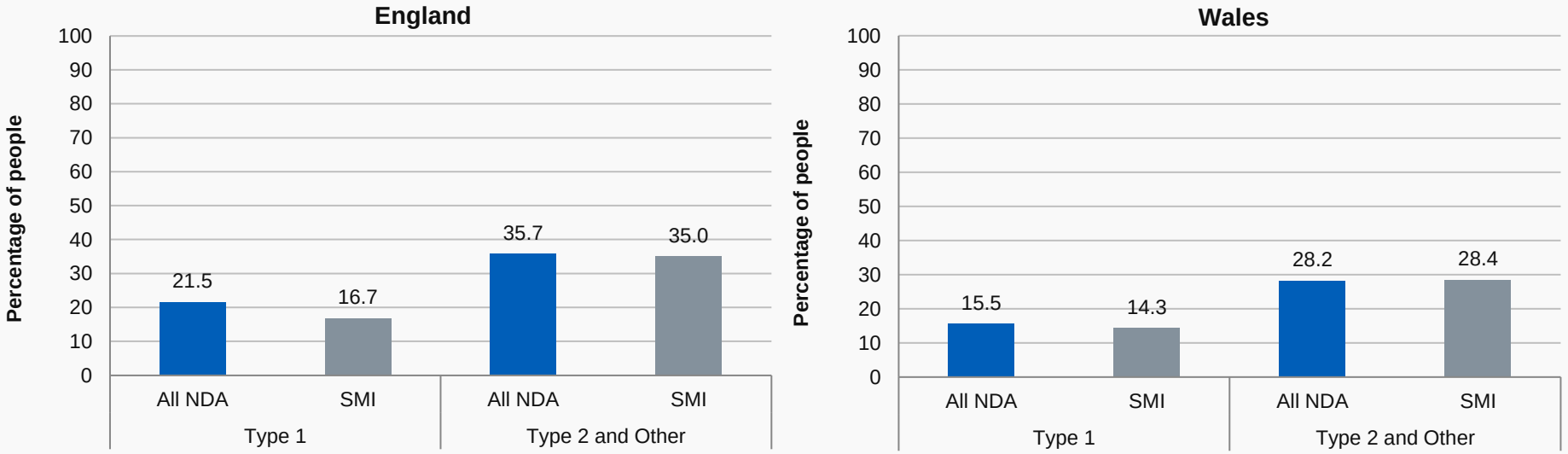


For people with type 1 diabetes in England, those that have been diagnosed with severe mental illness are more likely to have received all 8 care processes. In Wales, those diagnosed with severe mental illness are less likely to have received all 8 care processes.

For people with type 2 or other diabetes in both England and Wales, those that have been diagnosed with severe mental illness are less likely to have received 8 care processes.

Severe Mental Illness (SMI) and Treatment Target Achievement

Figure 18: Percentage of people with diabetes achieving all 3 treatment targets, by diabetes type, SMI diagnosis and country, 2020-21



For people with type 1 diabetes in both England and Wales, those that have been diagnosed with severe mental illness are less likely to have achieved all three treatment targets.

For people with type 2 or other diabetes, no appreciable difference between the groups was observed in either England or Wales.

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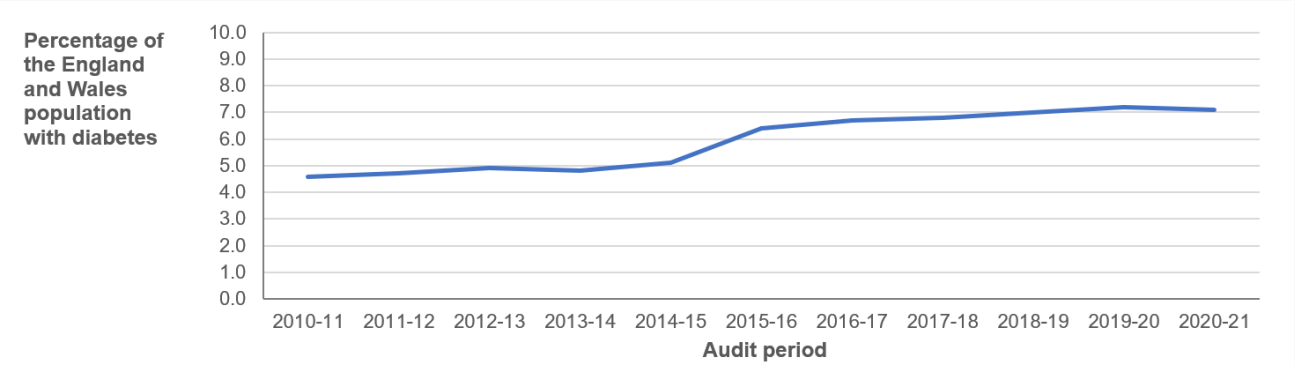
Additional information

Registrations

Table 3: Diabetes registrations and prevalence for all types of diabetes by source, England and Wales, 2020-21

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
2020-21	3,648,240	7.1%	3,611,365	36,875

Figure 19: Percentage of the England and Wales population with diabetes between 2010-11 and 2020-21



The prevalence of diabetes has generally increased year on year since 2010-11 in England and Wales from less than 5% to more than 7%.

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: https://www.gov.uk/government/publications/diabetes-prevalence-estimates-for-local-populations

* 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 Process Table: Type 1 by Country, 2015-21

Table 4: Percentage of people with type 1 diabetes receiving NICE recommended care processes by audit year and country, 2015-16 to 2020-21

England (percent)						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
HbA1c	84.5	84.9	85.4	86.3	83.6	75.8
Blood Pressure	89.4	90.6	91.1	91.5	90.5	73.7
Serum Cholesterol	80.0	80.8	81.1	81.8	78.5	67.9
Serum Creatinine	82.1	83.3	83.5	83.9	80.9	73.8
Urine Albumin/ Creatinine Ratio	51.0	51.0	52.3	49.3	53.5	42.5
Foot Risk Surveillance	73.7	70.1	75.1	75.8	72.5	51.0
Body Mass Index	75.8	75.8	82.7	84.5	83.7	67.5
Smoking History	79.0	79.8	90.4	90.8	89.8	84.0
Digital Retinal Screening	-	-	-	-	79.4	61.3
8 Care Processes*	**37.3**	**34.4**	**42.9**	**40.8**	**42.3**	**27.4**
9 Care Processes*	-	-	-	-	**37.4**	**19.9**

Wales (percent)						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
HbA1c	73.3	74.7	74.7	73.8	71.4	61.3
Blood Pressure	85.2	84.8	83.5	82.4	80.3	58.7
Serum Cholesterol	67.0	66.4	65.2	64.1	60.7	50.8
Serum Creatinine	73.5	74.0	73.8	73.3	71.3	62.5
Urine Albumin/ Creatinine Ratio	39.5	36.2	35.1	33.8	31.9	24.7
Foot Risk Surveillance	62.3	60.6	56.9	52.8	47.7	25.7
Body Mass Index	67.5	67.2	66.7	66.5	65.8	47.1
Smoking History	71.7	70.0	82.8	80.5	78.2	67.3
Digital Retinal Screening	-	-	-	-	-	-
8 Care Processes*	**25.7**	**23.8**	**24.7**	**23.3**	**21.4**	11.8
9 Care Processes*	-	-	-	-	-	-

* 9 care processes includes Retinal Screening data, which we currently do not receive for Wales, meaning that Wales can only currently achieve completion of the NICE recommended 8 care processes in the NDA data

Care Process Table: Type 2 and other by Country, 2015-21

Table 5: Percentage of people with type 2 and other diabetes receiving NICE recommended care processes by audit year and country, 2015-16 to 2020-21

England (percent)						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
HbA1c	95.1	95.3	95.3	95.3	93.5	86.2
Blood Pressure	95.8	96.4	96.3	96.2	95.4	82.6
Serum Cholesterol	93.1	93.1	92.9	92.8	91.0	79.3
Serum Creatinine	94.8	95.1	95.1	94.4	92.3	85.7
Urine Albumin/ Creatinine Ratio	66.8	65.6	66.2	61.1	68.6	52.7
Foot Risk Surveillance	87.1	79.4	86.8	86.7	83.9	59.4
Body Mass Index	82.8	83.3	88.0	88.8	88.3	72.8
Smoking History	85.4	85.7	95.5	95.8	95.4	89.5
Digital Retinal Screening	-	-	-	-	80.4	49.5
8 Care Processes*	**53.9**	**47.7**	**58.8**	**54.3**	**58.5**	**36.9**
9 Care Processes*	-	-	-	-	**52.2**	**21.2**

Wales (percent)						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
HbA1c	92.9	92.8	92.4	92.1	91.3	80.7
Blood Pressure	94.9	94.4	93.3	92.3	91.1	73.9
Serum Cholesterol	87.9	86.9	85.1	84.2	82.8	69.7
Serum Creatinine	93.3	93.1	92.9	92.7	92.1	82.3
Urine Albumin/ Creatinine Ratio	64.6	59.8	56.9	56.1	55.0	40.1
Foot Risk Surveillance	81.2	78.6	74.8	72.5	68.6	38.9
Body Mass Index	80.7	79.7	79.0	79.7	79.4	62.1
Smoking History	83.4	82.2	91.7	90.7	89.3	78.7
Digital Retinal Screening	-	-	-	-	-	-
8 Care Processes*	**50.7**	**47.0**	**45.9**	**44.7**	**42.6**	**21.4**
9 Care Processes*	-	-	-	-	-	-

* 9 care processes includes Retinal Screening data, which we currently do not receive for Wales, meaning that Wales can only currently achieve completion of the NICE recommended 8 care processes in the NDA data

Treatment Target Table: Type 1 by Country, 2015-21

Table 6: Percentage of people with type 1 diabetes achieving their treatment targets by audit year and country, 2015-16 to 2020-21

England (percent)						
	2015-16	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**
HbA1c ≤ 58 mmol/mol	29.6	30.4	29.9	31.1	31.6	34.8
Blood pressure ≤ 140/80	75.7	76.0	74.8	74.8	73.9	71.0
Statins for Combined Prevention of CVD	-	-	68.9	68.3	69.4	69.5
Meeting all 3 treatment targets	-	-	**18.9**	**19.6**	**20.0**	**21.5**

Wales (percent)						
	2015-16	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**
HbA1c ≤ 58 mmol/mol	23.9	26.8	26.0	27.5	26.3	29.4
Blood pressure ≤ 140/80	74.7	73.3	71.6	68.7	65.9	63.8
Statins for Combined Prevention of CVD	-	-	67.3	66.6	66.5	65.0
Meeting all 3 treatment targets	-	-	**15.2**	**15.1**	**14.2**	**15.5**

Treatment Target Table: Type 2 and other by Country, 2015-21

Table 7: Percentage of people with type 2 and other diabetes achieving their treatment targets by audit year and country, 2015-16 to 2020-21

England(percent)						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
HbA1c ≤ 58 mmol/mol	65.9	67.0	65.8	66.5	65.6	63.4
Blood pressure ≤ 140/80	73.7	74.4	73.8	74.5	73.6	66.7
Statins for Combined Prevention of CVD	-	-	76.1	74.9	76.1	75.7
Meeting all 3 treatment targets	-	-	**40.2**	**40.5**	**40.1**	**35.7**

Wales (percent)						
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
HbA1c ≤ 58 mmol/mol	63.0	64.7	63.0	62.7	61.1	58.8
Blood pressure ≤ 140/80	72.4	71.1	68.4	66.8	64.6	58.8
Statins for Combined Prevention of CVD	-	-	73.5	72.6	72.0	71.3
Meeting all 3 treatment targets	-	-	**35.0**	**33.6**	**31.5**	**28.2**

Care Processes

All people with diabetes aged 12 years and over should receive all of the 9 NICE recommended care processes and attend a structured education programme shortly after diagnosis.

Table 8: 9 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 (blood test for glucose control)	**5. Urine Albumin/Creatinine Ratio** (urine test for risk of kidney disease)
2. Blood Pressure (measurement for cardiovascular risk)	**6. Foot Risk Surveillance** (examination for foot ulcer risk)
3. Serum Cholesterol (blood test for cardiovascular risk)	**7. Body Mass Index** (measurement for cardiovascular risk)
4. Serum Creatinine (blood test for kidney function)	**8. Smoking History** (question for cardiovascular risk)
Responsibility of NHS Diabetes Eye Screening (NHS England & Improvement)*	
9. Digital Retinal Screening (photographic eye test for early detection of eye disease)	

* The screening registers are drawn from practice registers but the outcomes are recorded in screening management systems that presently cannot export data to the NDA

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 (Page 1 of 2)

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 risk of heart attacks and stroke for people with diabetes.

HbA1c – this is a blood test for average blood glucose levels during the previous 2 to 3 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* – having HbA1c ≤58mmol/mol, blood pressure ≤140/80 and for people falling in the combined prevention CVD group: receiving statins.

*Patients under 12 years of age are only required to meet the HbA1c target.

Definitions (Page 2 of 2)

Clinical Commissioning Group (CCG)

Clinical Commissioning Groups (CCGs) commission most of the hospital and community NHS services, in England in the local areas for which they are responsible.
Commissioning involves deciding what services are needed for diverse local populations, and ensuring that they are provided. CCGs are assured by NHS England, which retains responsibility for commissioning primary care services such as GP and dental services, as well as some specialised hospital services. Many GP services are now co-commissioned with CCGs.

Local Health Board (LHB)

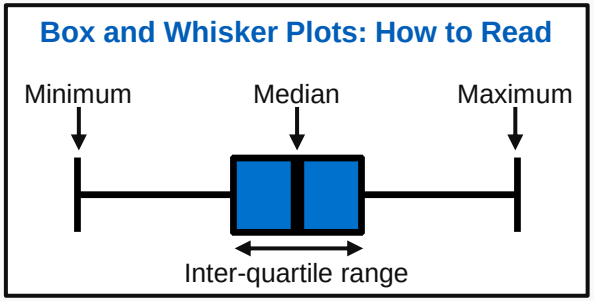
Local Health Boards (LHBs) are administrative units of NHS Wales, set up to effectively plan services for the populations of their respective local authorities. The boards have the responsibility of financing hospital trusts, GPs, dentists, and other healthcare professionals to provide these services.

Severe Mental Illness (SMI)

Severe mental illness (SMI) refers to people with psychological problems that are often so debilitating that their ability to engage in functional and occupational activities is severely impaired.

Type 2 and other diabetes

In addition to people with type 2 diabetes, this includes those with Maturity-onset Diabetes of the Young (MODY) and non-specified diabetes types.



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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.

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