

National Diabetes Audit, 2016-17

Report 1: Care Processes and Treatment Targets

England and Wales

14th March 2018

Severe Mental Illness - Supplementary Information

Prepared in collaboration with:



The Healthcare Quality Improvement Partnership (HQIP). The National Diabetes Audit (NDA) is part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP) which is commissioned by the Healthcare Quality Improvement Partnership (HQIP) and funded by NHS England. 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, and in particular to increase the impact that clinical audit has on healthcare quality in England and Wales. HQIP holds the contract to manage and develop the NCAPOP Programme, comprising more than 30 clinical audits that cover 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 audits, also funded by the Health Department of the Scottish Government, DHSSPS Northern Ireland and the Channel Islands.



NHS Digital is the trading name for the Health and Social Care Information Centre (HSCIC). NHS Digital managed the publication of the 2016-17 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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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.

Key Findings

- Severe Mental Illness (SMI) is twice as common in people with Type 2 and other diabetes as in people with Type 1 diabetes or the general population.
- People with Type 2 diabetes and SMI are, on average, younger than their non-SMI counterparts.
- There are more men than women in the overall population of people with diabetes but equal numbers in those who also have SMI.
- People with diabetes and SMI have higher levels of social deprivation and are more likely to have an ethnic minority heritage.
- People with Type 1 diabetes and SMI receive similar or more care checks. But those who have Type 2 diabetes and SMI are less likely to receive their annual checks, especially for urine albumin and foot risk.
- Having SMI does not appear to influence the chance of achieving all three diabetes treatment targets for people with all types of diabetes who receive their blood pressure, HbA1c and cholesterol care process checks.

Recommendations

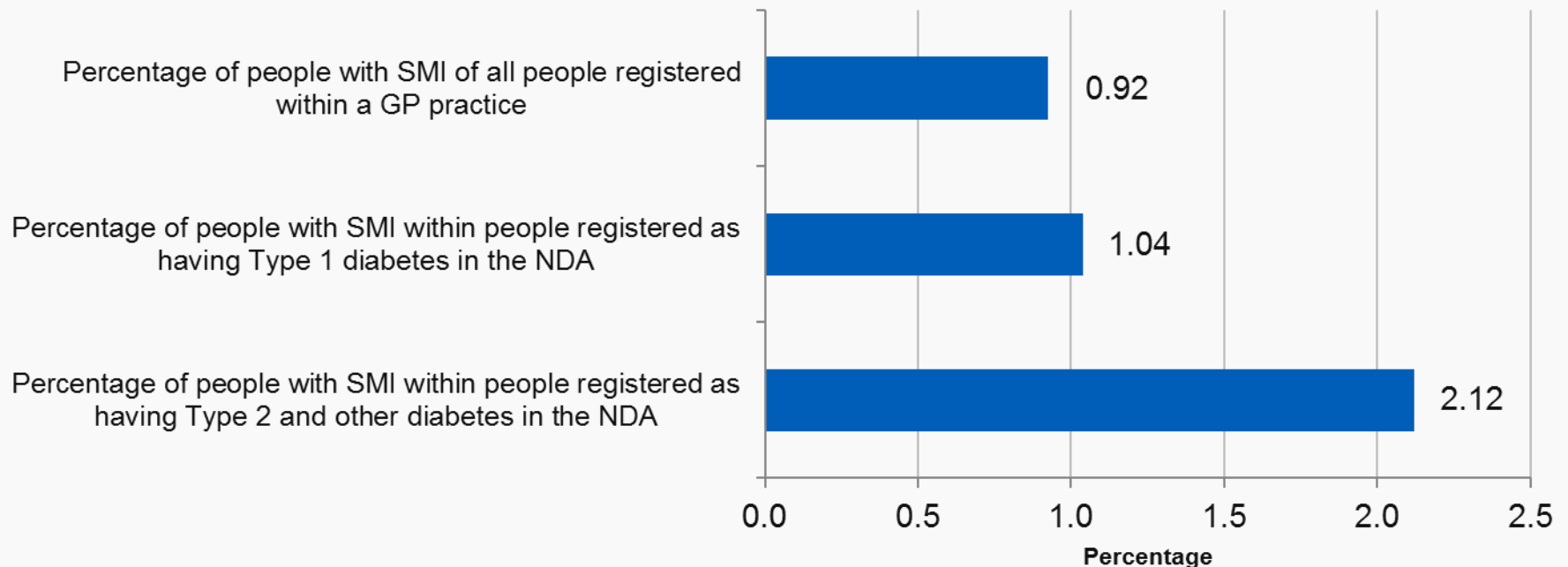
- SMI care providers should be aware of the higher risks of Type 2 diabetes at younger age onset and in females.
 - **Who:** all psychiatric services and General Practices.
 - **What:** be alert to the high likelihood of diabetes and the enhanced risks with younger onset.
 - **Where/when:** in mental health providers and General Practices, now.
- Type 2 diabetes and mental health care providers should work with people who have SMI to increase care process completion.
 - **Who:** all GP providers in collaboration with secondary care, community and voluntary sector providers supported by all CCGs/LHBs.
 - **What:** design and test new approaches to provide regular review and optimising care process completion in people with diabetes and SMI.
 - **Where/when:** in all relevant services, now.

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**What is the prevalence of
Severe Mental Illness in people
with diabetes?**

Prevalence of Severe Mental Illness

Severe Mental Illness (SMI) is twice as common in people with Type 2 and other diabetes as in people with Type 1 diabetes and the general population⁵.



Of the 3,136,070 people registered at a GP practice in the 2016-17 NDA, 63,920 were diagnosed with SMI*. Of these, 2,450 have Type 1 diabetes (16.0% were diagnosed with SMI first) and 61,470 have Type 2 or other (34.9% diagnosed with SMI first).

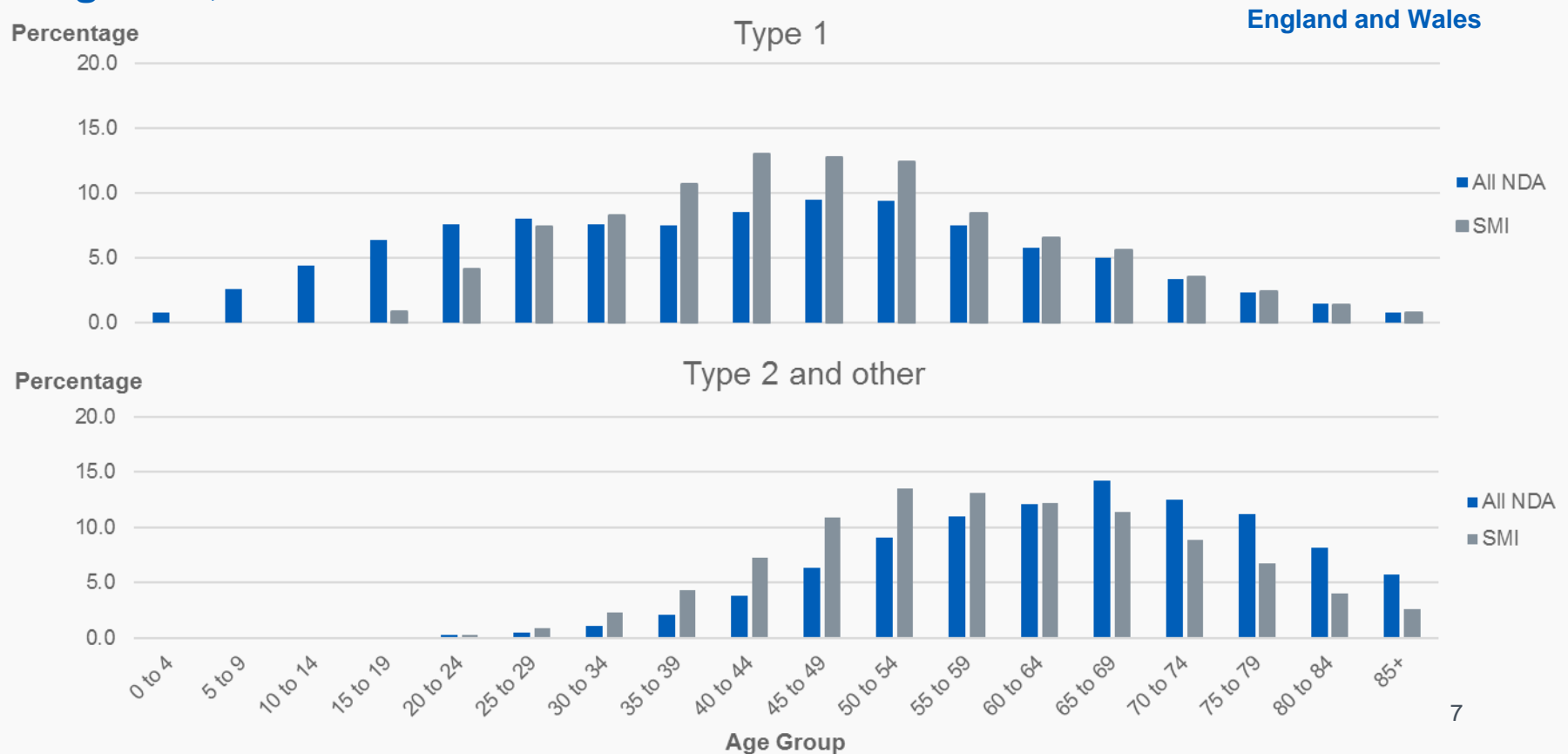
* SMI prevalence figures include all people submitted by GP practices and specialist care and will therefore be different to the SMI care process and treatment target figures provided later in the report. Care process and treatment target figures throughout the report are based only on people submitted by GP practices.

5. Please see full list of footnotes in the definitions and footnote section

Diabetes and SMI - Age Profile

People with Type 2 diabetes and SMI are, on average, younger than their non-SMI counterparts.

Figure 1: Percentage of people with diabetes, by diabetes type, age and SMI diagnosis, 2016-17

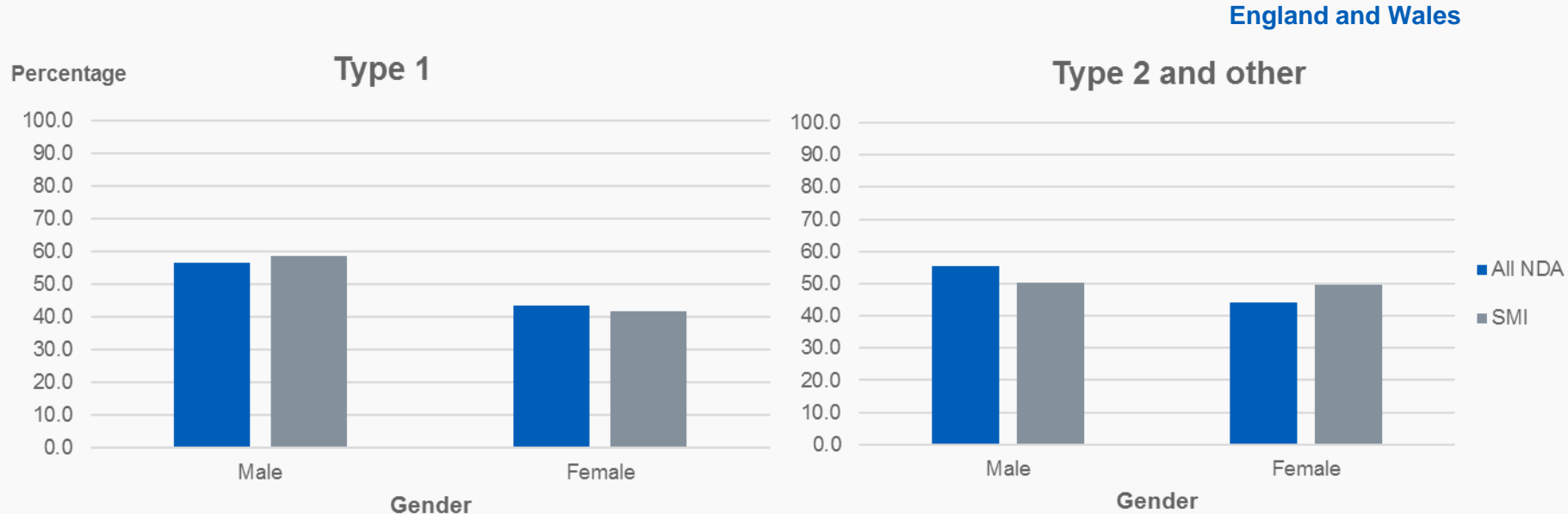


Diabetes and SMI – Gender Profile

For Type 1 diabetes, there is no difference in the sex distribution between those with and without SMI.

For Type 2 diabetes, there are more men than women in the overall population but equal numbers in those with SMI.

Figure 2: Percentage of people with diabetes, by diabetes type, gender and SMI diagnosis, 2016-17

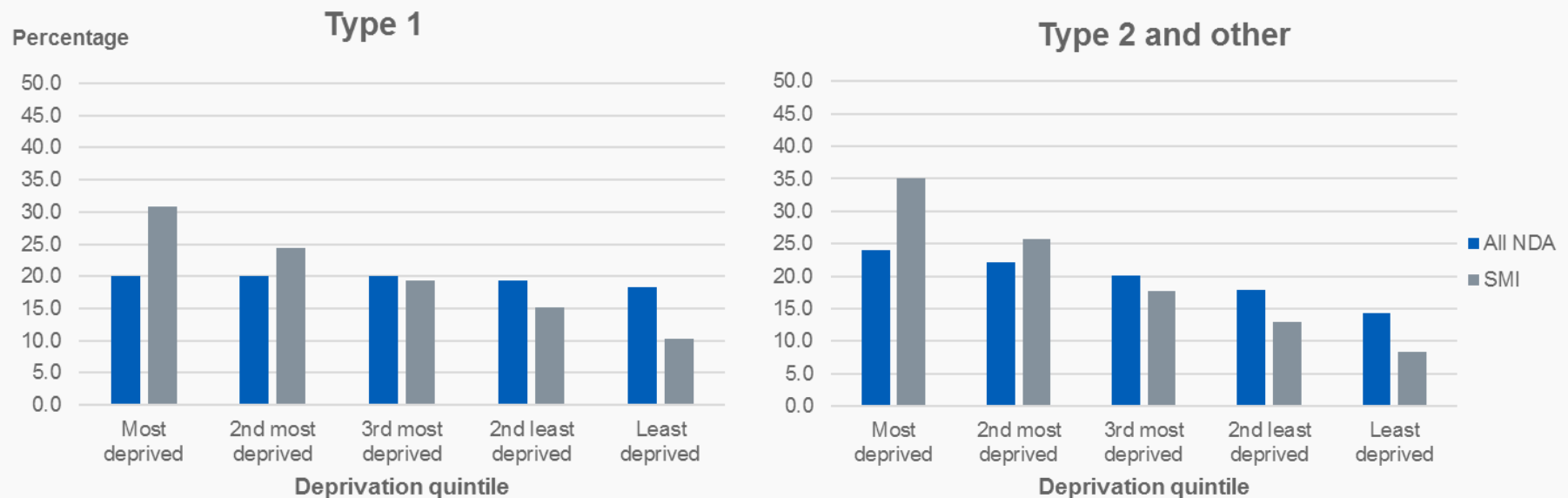


Diabetes and SMI – Deprivation Profile

People with SMI are more likely to experience socioeconomic deprivation.

Figure 3: Percentage of people with diabetes, by diabetes type, deprivation and SMI diagnosis, 2016-17

England and Wales

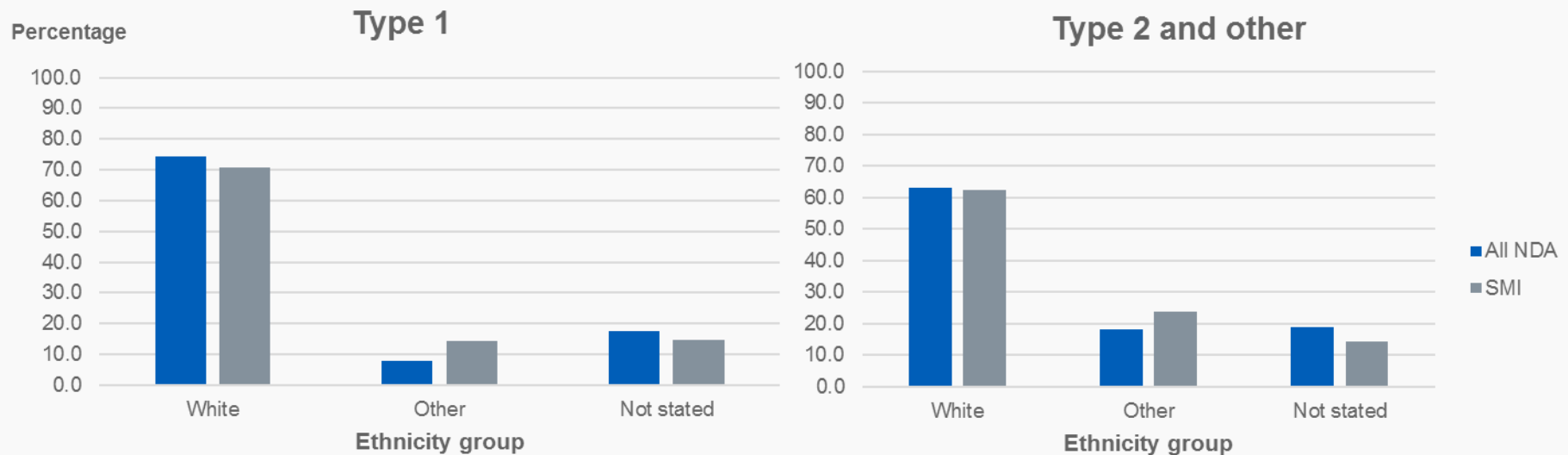


Diabetes and SMI – Ethnicity Profile

Non-white ethnicities are more common among people with SMI.

Figure 4: Percentage of people with diabetes, by diabetes type, ethnicity group and SMI diagnosis, 2016-17

England and Wales



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Is there a difference in the care process completion for those with a Severe Mental Illness?

Care Processes

All people with diabetes aged 12 years and over should receive all of the nine NICE recommended care processes^{1,2} and attend a structured education programme shortly after diagnosis.

Nine Annual Care Processes for all people with diabetes aged 12 and over

Responsibility of Diabetes Care providers (included in 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, Public Health England)
(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)

9. Digital Retinal Screening
(photographic eye test for early detection of eye disease)

Diabetes and SMI - Care Processes

People with Type 1 diabetes and SMI receive similar or more care checks. But those who have Type 2 diabetes and SMI are less likely to receive their annual checks, especially for urine albumin and foot risk.

Table 1: Percentage of people with diabetes receiving NICE recommended care processes by process, diabetes type and SMI diagnosis, 2016-17

England and Wales

| | Type 1 | | Type 2 and other ³ | |
|---|-------------|-------------|-------------------------------|-------------|
| | All NDA | SMI | All NDA | SMI |
| Number of people | 236,165 | 2,450 | 2,899,910 | 61,470 |
| HbA1c | 84.3 | 91.2 | 95.1 | 93.5 |
| Blood pressure | 90.3 | 94.8 | 96.2 | 96.2 |
| Cholesterol | 79.9 | 85.8 | 92.7 | 90.9 |
| Serum creatinine | 82.7 | 89.8 | 95.0 | 93.5 |
| Urine albumin* | 50.1 | 49.1 | 65.2 | 55.2 |
| Foot surveillance** | 69.5 | 71.6 | 79.4 | 75.4 |
| BMI | 75.3 | 80.0 | 83.1 | 83.0 |
| Smoking | 79.2 | 88.9 | 85.5 | 88.5 |
| Eight care processes⁴ | 33.7 | 34.9 | 47.6 | 40.6 |

3,4. Please see full list of footnotes in the definitions and footnote section.

* There is a 'health warning' regarding the screening test for early kidney disease (Urine Albumin Creatinine Ratio, UACR) prior to 2013-14; please see the [NDA Data Quality statement](#)

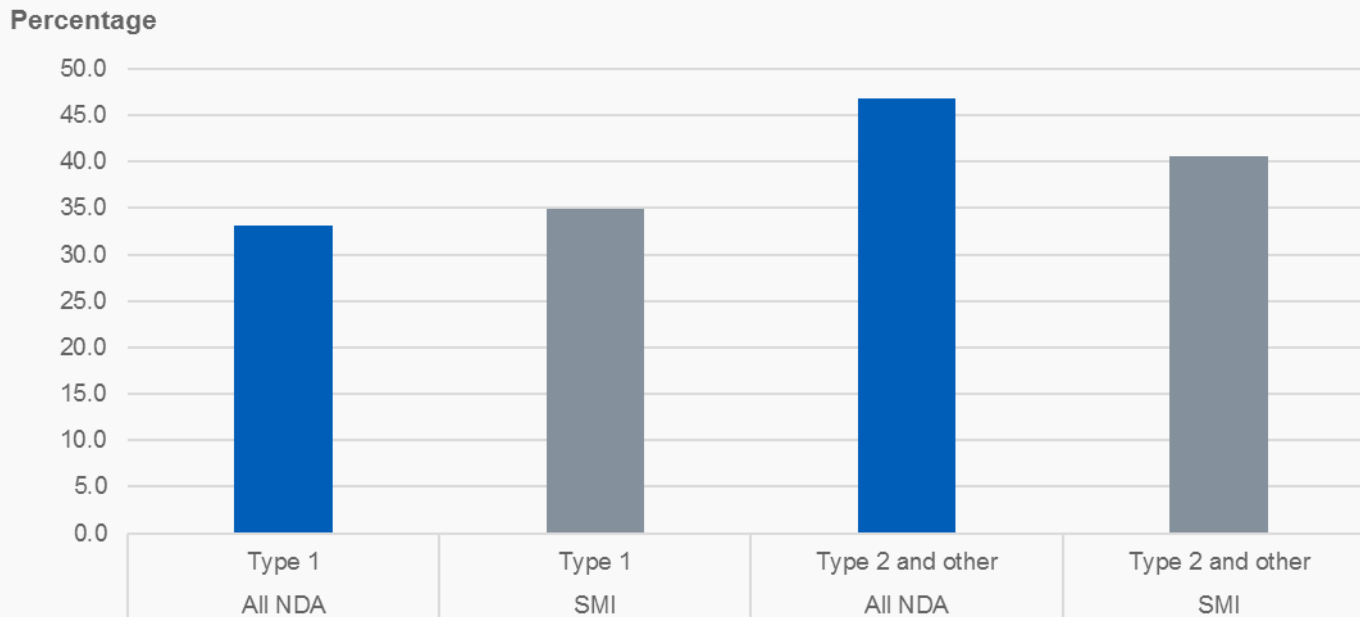
** It has been identified that foot surveillance data could have been under-reported for a number of GP practices who use the TPP SystmOne clinical system in 2016-17

Diabetes and SMI - Care Processes

People with Type 1 diabetes and SMI receive similar or more care checks. But those who have Type 2 diabetes and SMI are less likely to receive their annual checks.

Figure 5: Percentage of people with diabetes receiving all eight NICE recommended care processes by diabetes type and SMI diagnosis, 2016-17

England and Wales

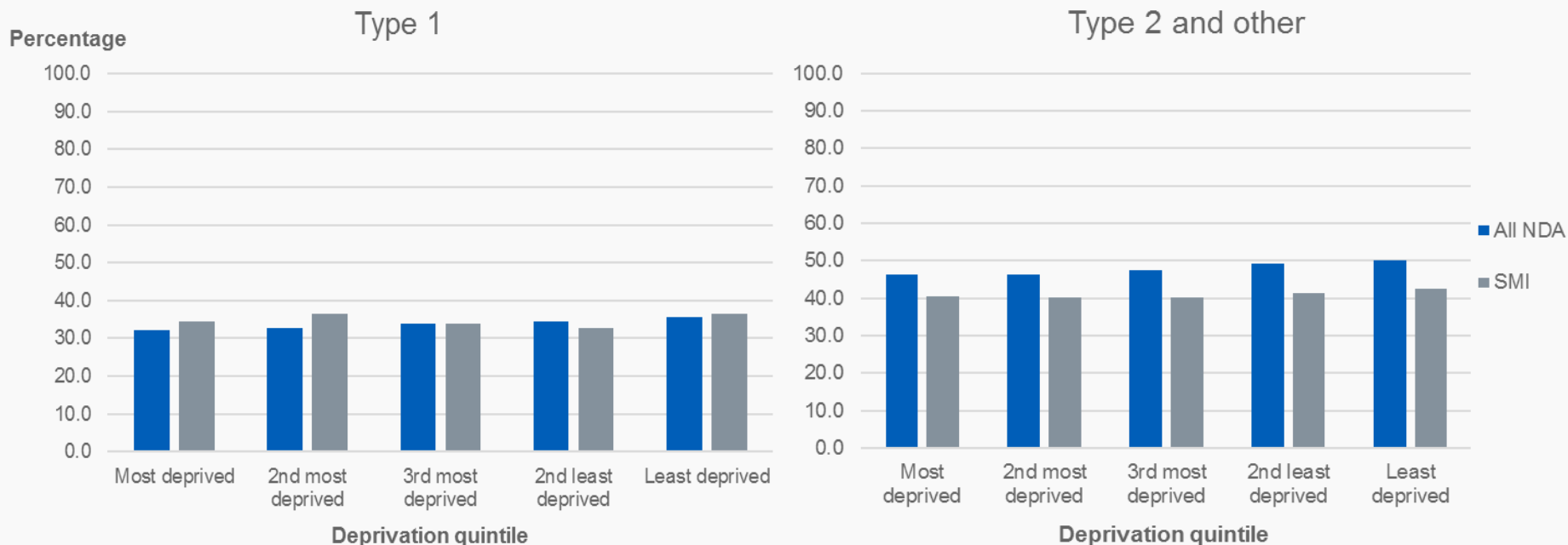


Diabetes and SMI - Care Processes by Deprivation

Although people with diabetes and SMI are more likely to be socially deprived, the level of social deprivation does not influence the likelihood of completing the diabetes annual care processes.

Figure 6: Percentage of people with diabetes receiving all eight NICE recommended care processes by diabetes type and deprivation, 2016-17

England and Wales

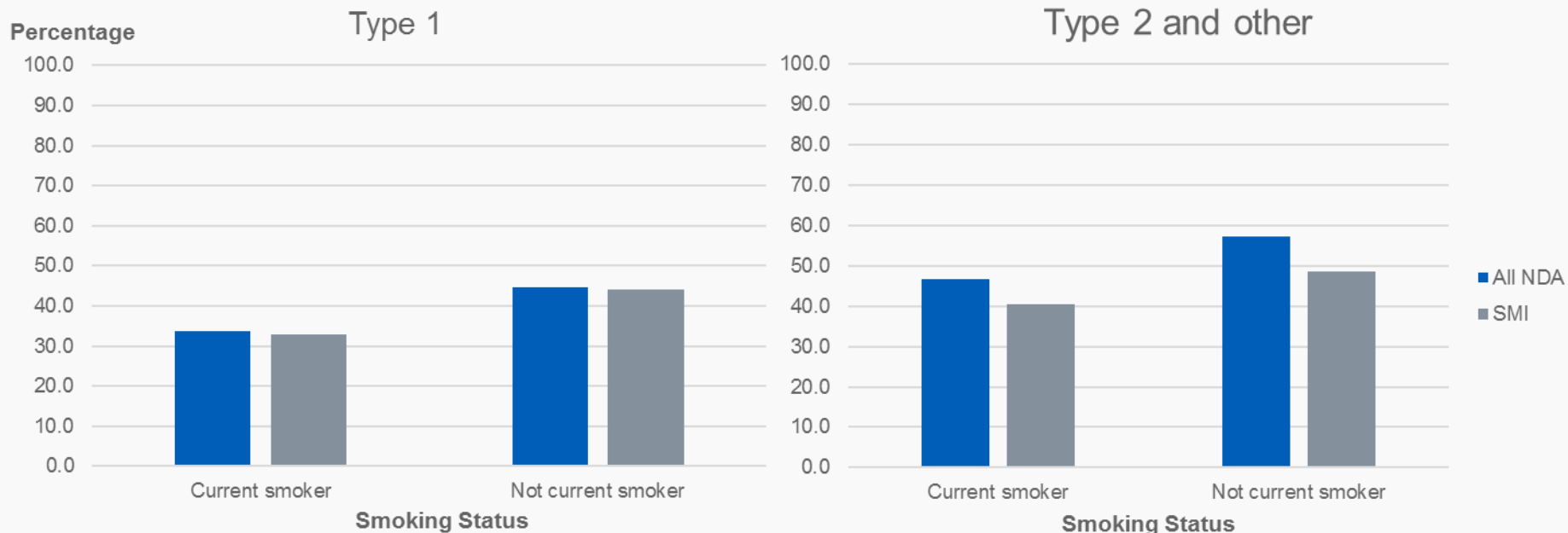


Diabetes and SMI - Care Processes by Smoking Status

As for people with diabetes who do not have SMI current smoking is associated with a lower likelihood of completing the annual diabetes care processes.

Figure 7: Percentage of people with diabetes receiving all eight NICE recommended care processes by diabetes type and smoking status, 2016-17

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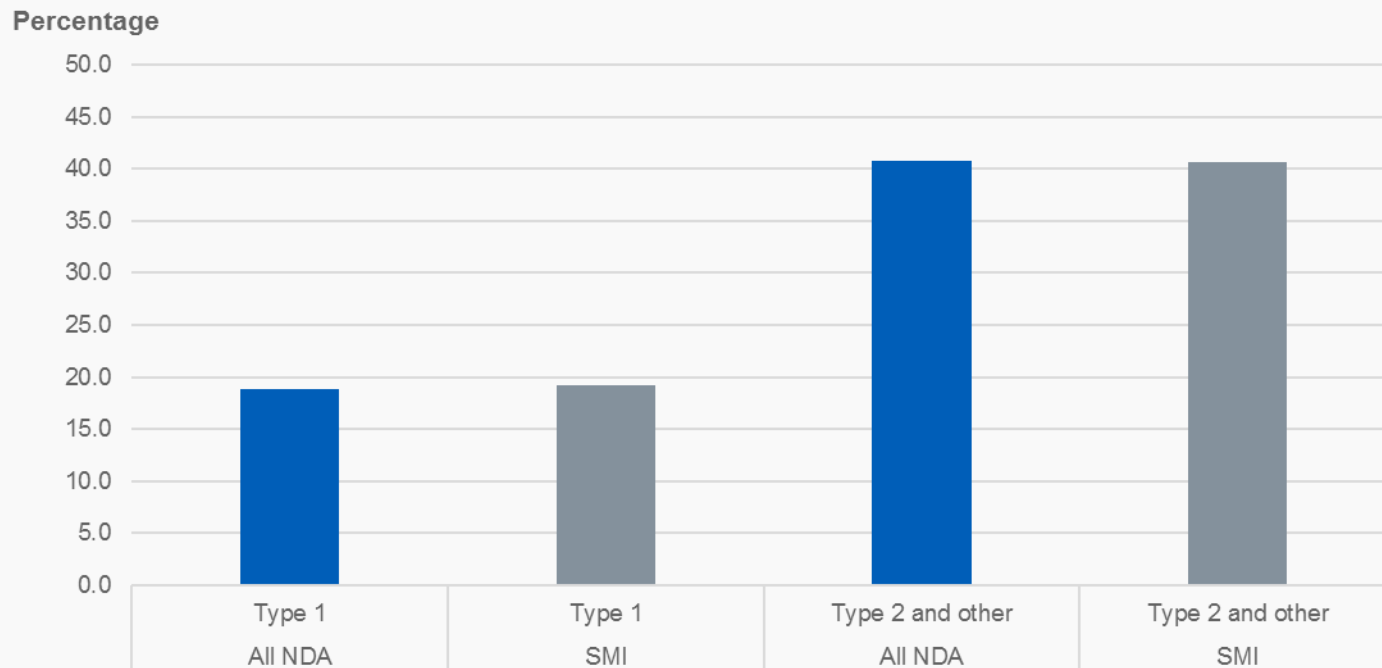
Is there a difference in the achievement of the NICE defined treatment targets for glucose control, blood pressure and blood cholesterol for those with a Severe Mental Illness?

Diabetes and SMI - Treatment Targets

Having SMI does not appear to influence the chance of achieving all three diabetes treatment targets for people with all types of diabetes who receive their blood pressure, HbA1c and cholesterol care process checks.

Figure 8: Percentage of people with diabetes achieving all three treatment targets by diabetes type and SMI diagnosis, 2016-17

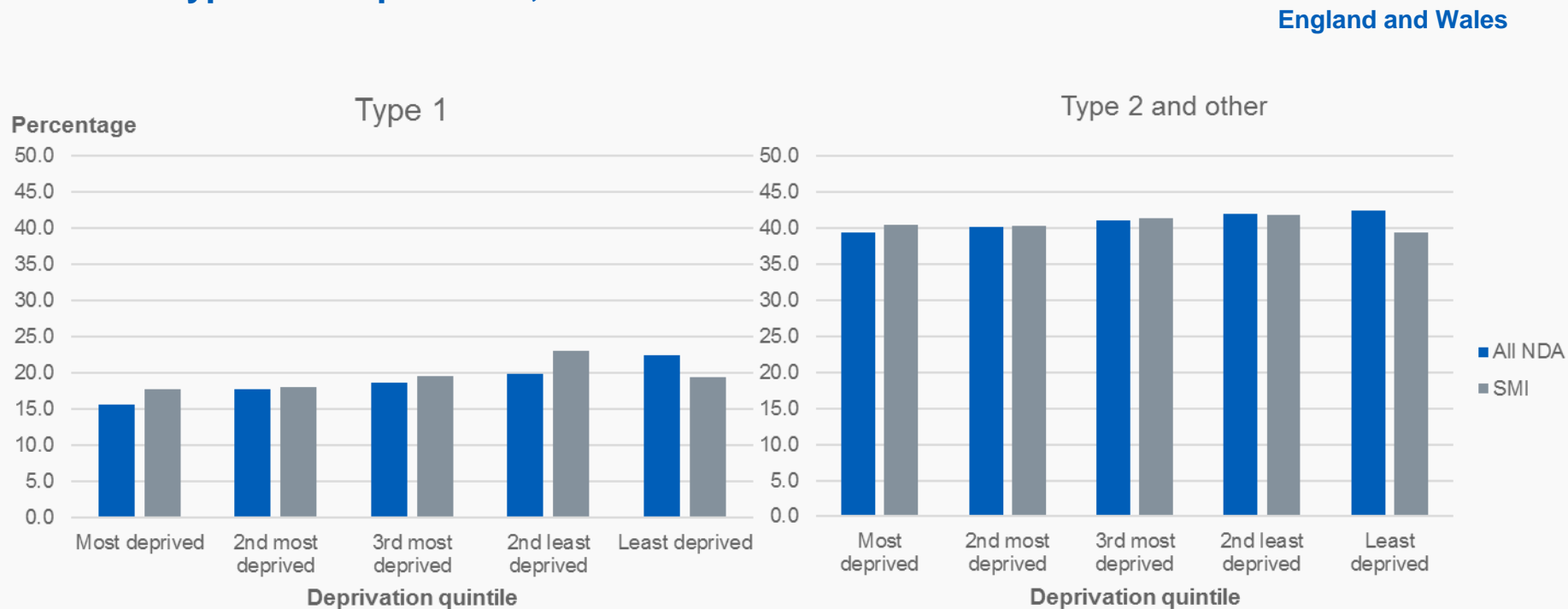
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Diabetes and SMI - Treatment Targets by Deprivation

The patterns of the very minimal association between deprivation and treatment target achievement are similar for people with and without SMI.

Figure 9: Percentage of people with diabetes achieving all three treatment targets by diabetes type and deprivation, 2016-17

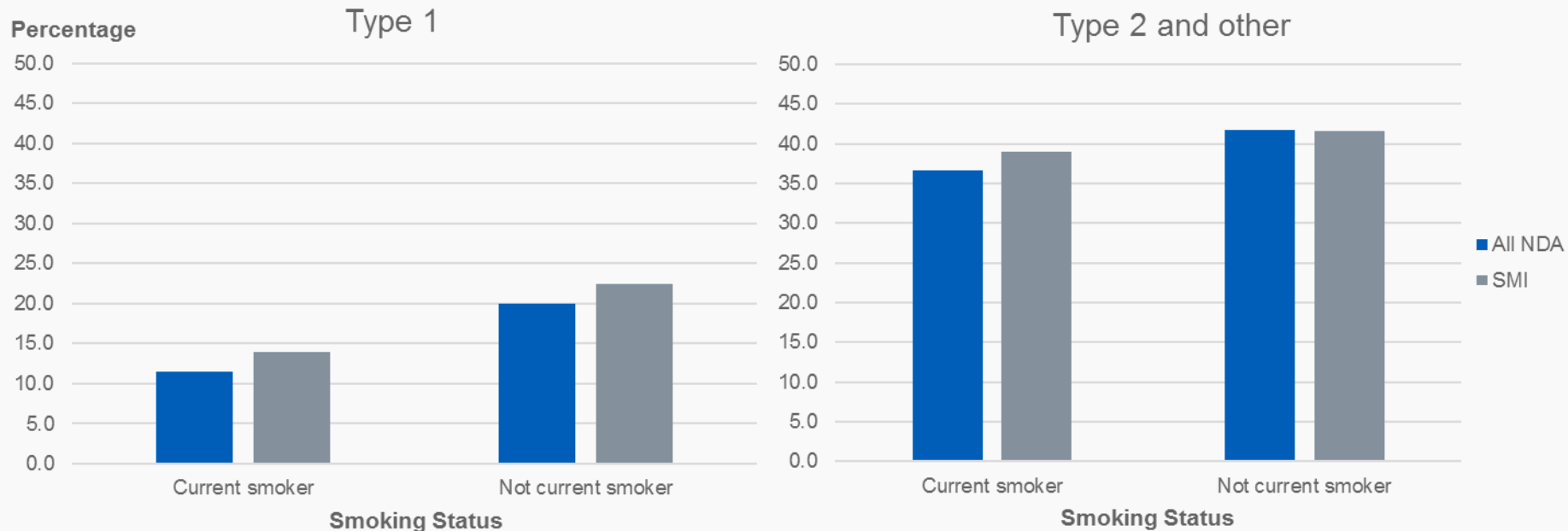


Diabetes and SMI - Treatment Targets by Smoking Status

As for people without SMI current smoking is associated with a lower rate of treatment target achievement.

Figure 10: Percentage of people with diabetes achieving all three treatment targets by diabetes type and smoking status, 2016-17

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Definitions, footnotes, data sources and further reading

Definitions

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 calculated from weight and height to classify under, normal and overweight.

Serum creatinine – this blood test is used as 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 check - 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.

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.

Definitions

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.

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).

Learning Disability

A learning disability usually has a significant impact on a person's life. A person with a learning disability finds it harder than others to learn, understand and communicate.

People with profound and multiple learning disabilities need full-time help with every aspect of their lives, including eating, drinking, washing, dressing and toileting etc.

Severe Mental Illness

This includes the diagnoses of schizophrenia, bipolar disorder and other psychoses. SMI often has a serious impact on a person's ability to manage their physical healthcare and is associated with an increased risk of Type 2 diabetes.

Footnotes

1. NICE recommended care processes <http://www.nice.org.uk/guidance/conditions-and-diseases/diabetes-and-other-endocrinal--nutritional-and-metabolic-conditions/diabetes>
2. National Service Framework (NSF) for Diabetes
<https://www.gov.uk/government/publications/national-service-framework-diabetes>
NICE Clinical Guidelines – NG17: Type 1 diabetes in adults: diagnosis and management
<http://www.nice.org.uk/guidance/ng17>
NICE Clinical Guidelines – NG28: Type 2 diabetes in adults: management
<http://www.nice.org.uk/guidance/ng28>
NICE – Diabetes in Adults Quality Standard <http://guidance.nice.org.uk/QS6>
3. Type 2 diabetes includes people with Maturity Onset Diabetes of the Young (MODY), other and non specified diabetes type.
4. The eye screening care process is not included; therefore ‘eight care processes’ comprises of the eight care processes excluding eye screening.
5. The prevalence of people with SMI is published in the Quality Outcomes Framework (QOF) <https://digital.nhs.uk/catalogue/PUB30124> in England and <http://gov.wales/statistics-and-research/general-medical-services-contract/?lang=en> in Wales.

Additional Information

The following documents are available from <http://www.digital.nhs.uk/pubs/ndauditcorerep1617>

- Supporting data in Excel
 - Supporting Information – National tables and charts
 - Supporting Information – Learning Disability tables and charts
 - Supporting Information – Severe Mental Illness tables and charts
 - CCG/GP practice level interactive spreadsheet
 - LHB level interactive spreadsheet
 - Specialist Service (England) interactive spreadsheet
- PowerPoint version of this report
- PowerPoint version of the Learning Disability supplementary report (including pdf version)
- PowerPoint version of the Severe Mental Illness supplementary report (including pdf version)
- One page summary of the NDA 2016-17 key findings and recommendations (pdf)
- Data Quality Statement (pdf)
- Methodology Report (pdf)

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