Harrow
JSNA Online

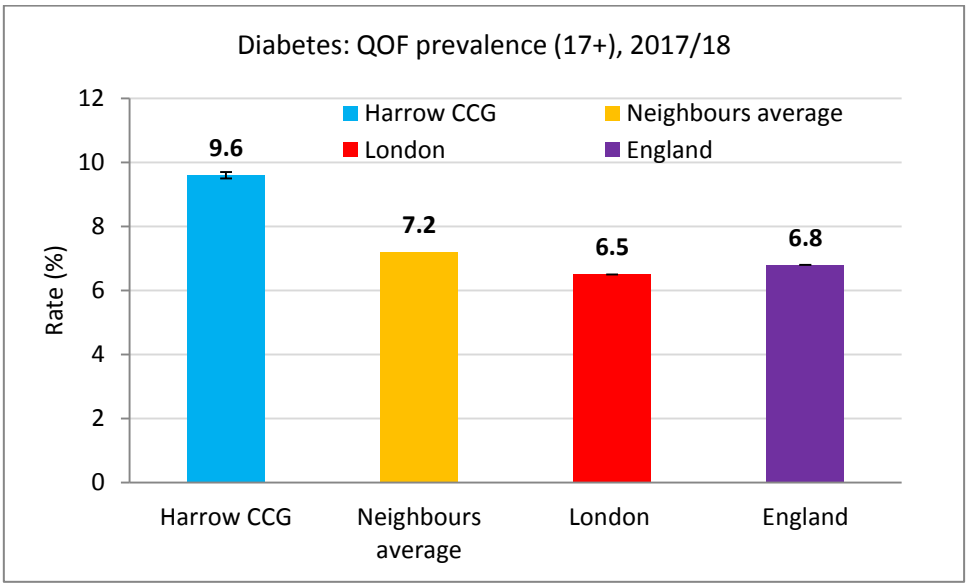
PUBLIC HEALTH REPORT

DIABETES

Introduction

In 2017/18 there were 20,296 people, aged 17 years or older, who had been diagnosed with diabetes and included on GP registers in NHS Harrow CCG. This equals 9.6% of the population. It was significantly higher than Nearest Neighbour Average (NNA) at 7.2%, London (at 6.5%) and England (at 6.8%) (Fig 1). However, the total prevalence of people with diabetes, diagnosed and undiagnosed, is estimated to be 10.5% compared to 8.5% for England.

Fig 1 QOF Prevalence (17+); Harrow, Neighbours average, London and England, 2017/18



Source: PHE, Public Health Outcome Framework (PHOF) – Fingertips, Diabetes

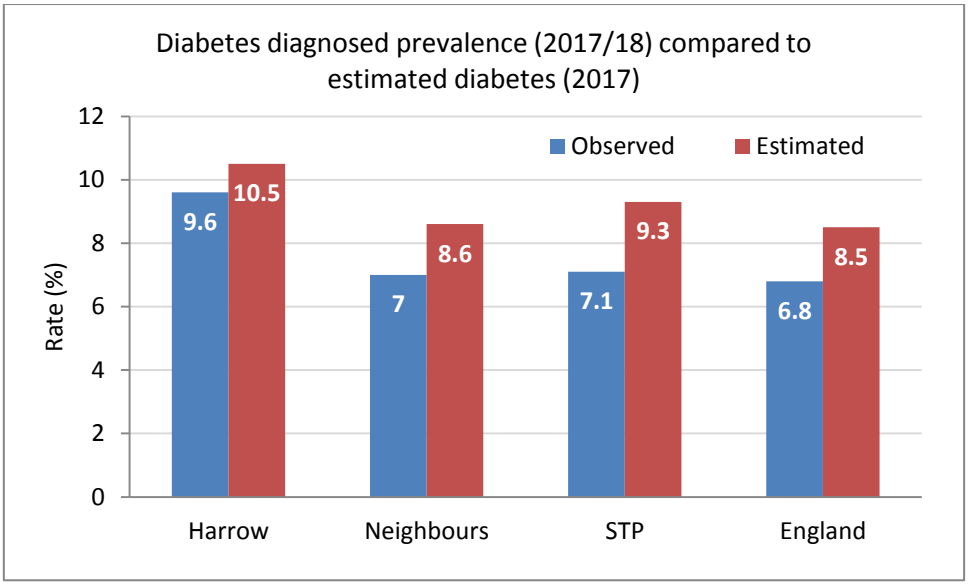
Disease Prevalence

Prevalence is the number of people in a given population with a particular condition at a given point in time. The diagnosed prevalence of diabetes is identified from the returns submitted to NHS Digital as part of the Quality and Outcomes Framework (QOF) by each GP practice. No distinction is made between type 1 or type 2 diabetes. Diagnosed prevalence is the number of patients aged 17 years

and over who are on the practice's diabetes register on 31 March in a given financial year. Practice returns are combined to calculate prevalence for the local CCG (PHE CVD Profiles-Diabetes, Jan 2019).

The estimated prevalence is taken from the NCVIN diabetes prevalence model. The model uses data from three years of Health Surveys for England - 2012, 2013 and 2014. The estimates take into account the age, sex and ethnic-group distribution, as well as deprivation of the area. It estimates the total number of people with diabetes (diagnosed and undiagnosed). Diabetes diagnosed prevalence (2017/18) compared to estimated diabetes (2017) for Harrow, Neighbours, STP and England is presented in Fig 2.

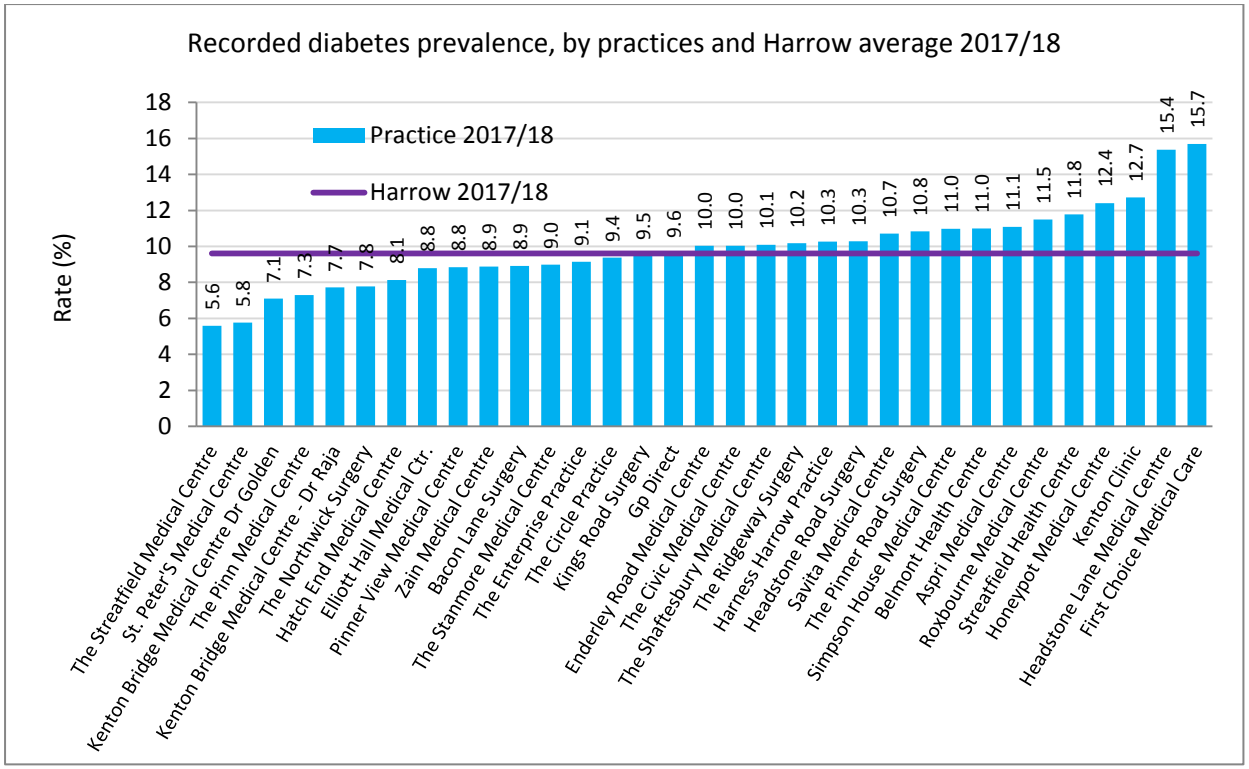
Fig 2 Diabetes diagnosed prevalence (2017/18) compared to estimated diabetes (2017)



Source: PHE, Public Health Outcome Framework (PHOF) – Fingertips, Diabetes

In NHS Harrow CCG, the prevalence of diagnosed diabetes was 9.6% and the estimated prevalence of diabetes was 10.5%. At GP practice level, the prevalence of diagnosed diabetes ranged from 5.6% to 15.7%.

Fig 3 Recorded diabetes prevalence, by Harrow practices and Harrow average 2017/18



Source: NHS Digital - QOF

The National Diabetes Audit

The National Diabetes Audit (NDA) is a major, national, clinical audit in England and Wales, which measures the effectiveness of diabetes healthcare against NICE guidelines and quality standards. In 2017/18, 98.2% of GP practices in England and Wales participated in the audit. In NHS Harrow CCG, 100% of practices participated (PHE, CVD Profiles – Diabetes, Jan 2019).

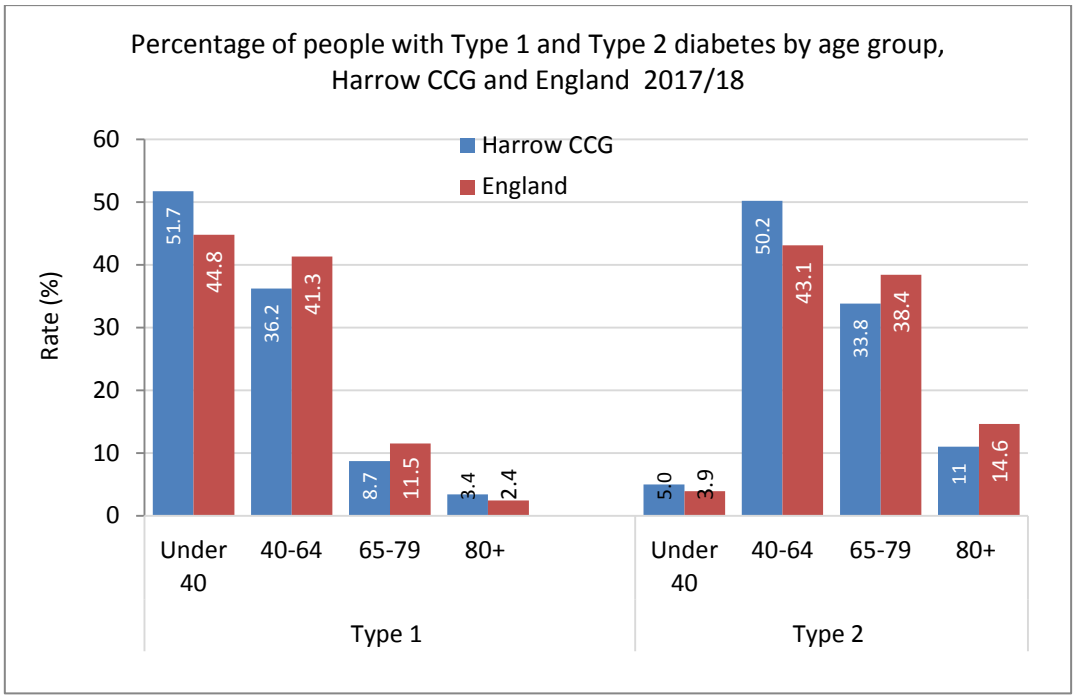
Characteristics of people with diabetes in NHS Harrow CCG

Diabetes by Age

Type 1 diabetes is usually diagnosed earlier in life than type 2 and 51.7% of people with type 1 diabetes in Harrow CCG are under the age of 40 (Fig 4).

People with type 2 diabetes are on average older than people with type 1, 44.8% of people with type 2 diabetes in Harrow CCG are aged over 65 (Fig 4).

Fig 4 Percentage of people with Type 1 and Type 2 diabetes by age group, Harrow CCG and England 2017/18

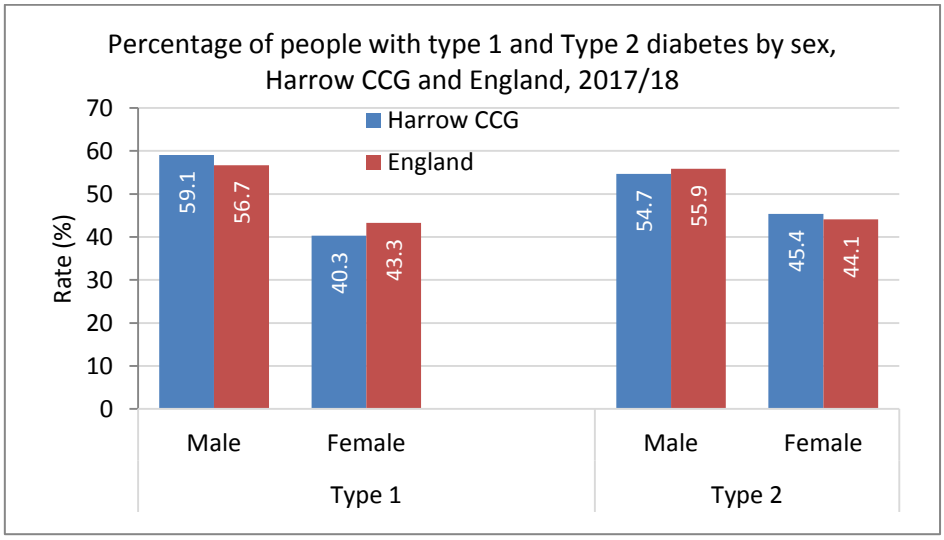


Source: PHE, Public Health Outcome Framework (PHOF) – Fingertips, Diabetes

Type 1 diabetes is more common in males than females. In Harrow CCG, 59.1% of people with type 1 diabetes are male. Type 2 diabetes is also more common in males than females, 54.7% of people with type 2 diabetes in Harrow CCG are male (Fig 5).

Diabetes by Sex

Fig 5 Percentage of people with Type 1 and Type 2 diabetes by sex, Harrow CCG and England 2017/18

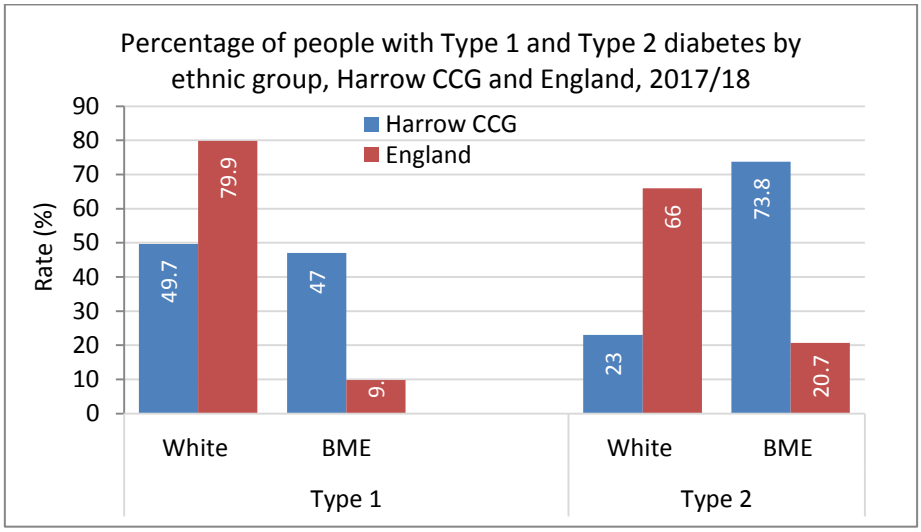


Source: PHE, Public Health Outcome Framework (PHOF) – Fingertips, Diabetes

Diabetes by Ethnic group

In NHS Harrow CCG, 49.7% of people with type 1 diabetes are of white ethnicity and 47% are from a minority ethnic group, the remaining ethnicities are unknown. For people with type 2 diabetes, 23.0% are of white ethnicity and 73.8% from a minority ethnic group, the remaining ethnicities are unknown (Fig 6).

Fig 6 Percentage of people with Type 1 and Type 2 diabetes by Ethnicity, Harrow CCG and England 2017/18

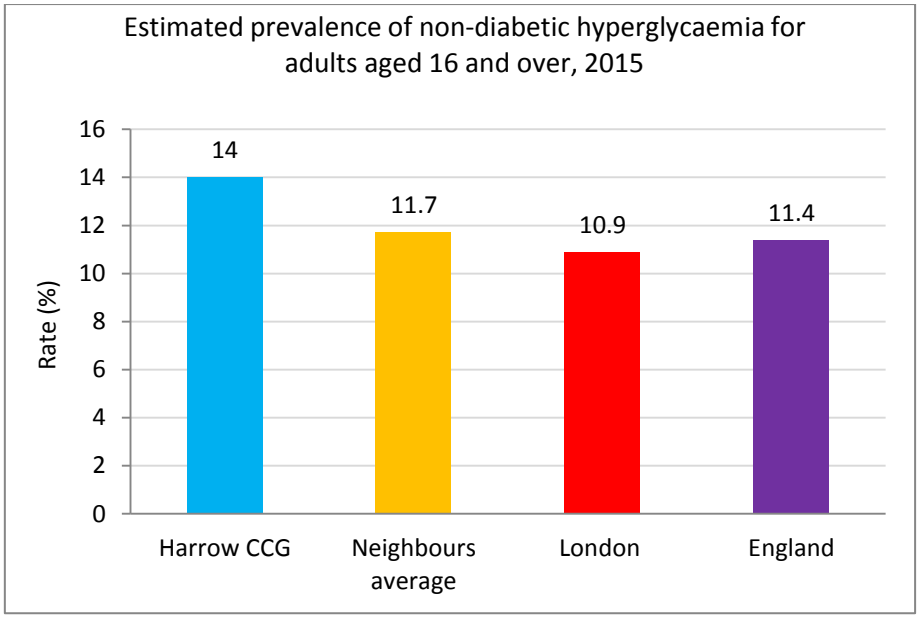


Source: PHE, Public Health Outcome Framework (PHOF) – Fingertips, Diabetes

Estimated prevalence of Non-Diabetic Hyperglycaemia (NDH)

The number of people with non-diabetic hyperglycaemia was estimated using a logistic regression model developed using Health Survey for England (HSE) data. Five years of HSE data were combined, 2009 - 2013. Non-diabetic hyperglycaemia was defined as an HBA1c value between 6.0% (42mmol/mol) and 6.4% (47mmol/mol), excluding those who had already been diagnosed with diabetes with an HBA1c value in this range. The estimates take into account the age, ethnicity and the estimated body mass index (BMI) of the local area. Fig 7 illustrates the estimated NDH rate for Harrow CCG, Neighbours, London and England.

Fig 7 Estimated prevalence of non-diabetic hyperglycaemia for adults aged 16 and over, Harrow CCG, Neighbours, London and England, 2015



Source: PHE, Public Health Outcome Framework (PHOF) – Fingertips, Diabetes

Care processes and treatment targets

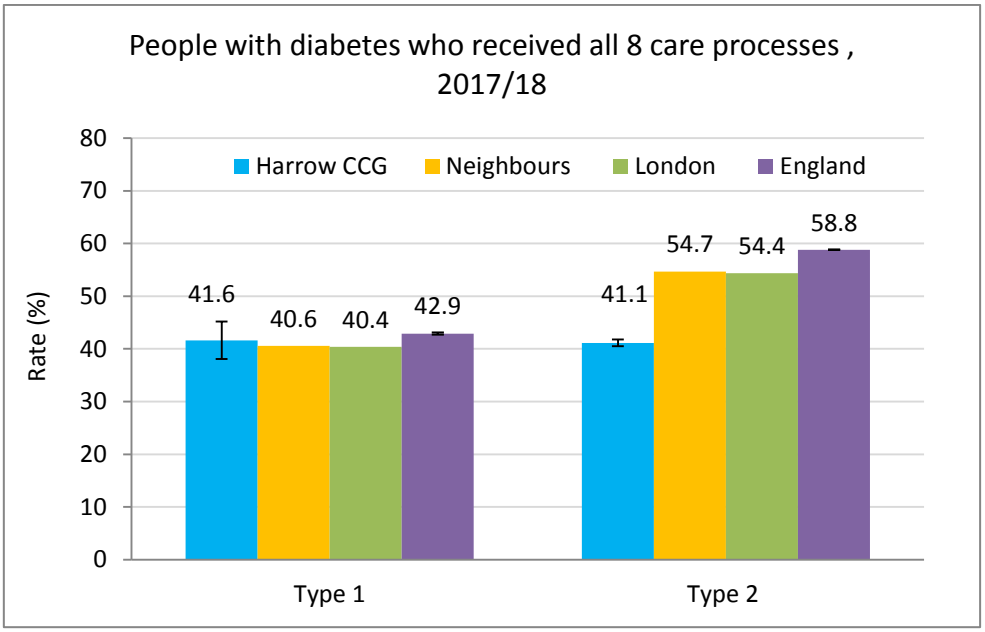
The National Institute for Health and Care Excellence (NICE) recommends nine care processes for diabetes. Five of these care processes relate to risk factors (body mass index, blood pressure, smoking, glucose levels (HbA1c) and cholesterol) and the remaining four relate to tests to identify early complications (urine albumin creatinine ratio, serum creatinine, foot nerve and circulation examination and eye screening - held by NHSDES and not included in the data presented).

Taking account of patient related factors when reviewing Care Process completion rates

The National Diabetes Audit (NDA) has investigated whether results are influenced by patient characteristics. The statistical models derived showed that patient characteristics did impact on whether the eight recommended care processes took place but did not impact on the treatment results (HbA1c, BP, and Cholesterol). The bandings contained within the tables below show whether the CCG is performing "as expected", "lower than expected" or "higher than expected" based on what we know of the characteristics of their diabetic populations. The statistical models used to predict care process completion take into account the age, sex, ethnicity, Indices of Multiple Deprivation (IMD), smoking status and Body Mass Index (BMI) of the person with diabetes. This provides a way of correcting for the factors that are outside the control of the GP. The bandings should not be treated as an absolute assessment of performance, but rather as a tool to aid local investigation (PHE, CVD Profiles – Diabetes, Jan 2019).

In NHS Harrow CCG, 41.6% of people with type 1 diabetes had the eight recommended care processes compared to 42.9% in England. For people with type 2 diabetes, 41.1% people had the eight recommended care processes, significantly lower than the England rate of 58.8% (Fig 8). A breakdown of the eight recommended care processes is also presented in Table 1.

Fig 8 People with Type 1 and Type 2 diabetes who received all 8 care processes, 2017/18



Source: PHE, Public Health Outcome Framework (PHOF) – Fingertips, Diabetes

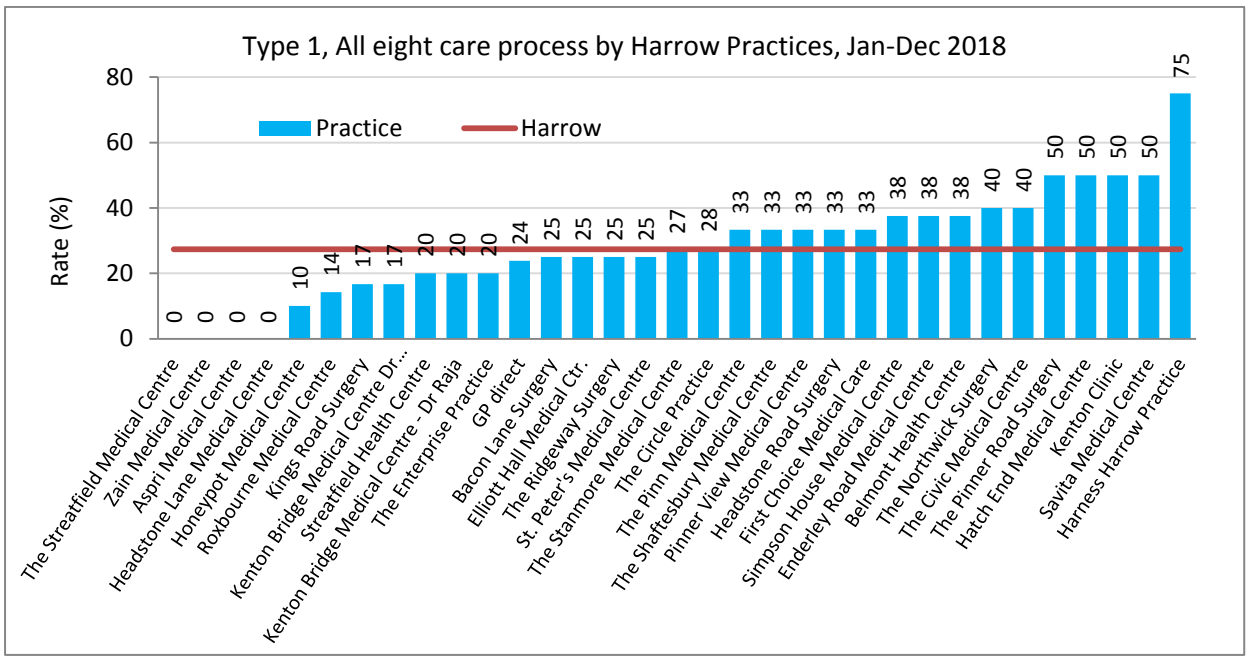
Table 1 Percentage of people with diabetes who had the eight recommended individual care processes by diabetes type, Harrow and England 2017/2018

Recommended Individual Care	Type 1			Type 2		
	Harrow	Banding	England	Harrow	Banding	England
Blood Pressure	92.1	As Expected	91.1	95.6	As Expected	96.3
BMI	82.0	As Expected	82.7	79.5	Lower	88.0
Cholesterol	82.7	As Expected	81.1	93.8	Higher	92.9
Foot Surveillance	77.7	As Expected	75.1	88.7	Higher	86.8
HbA1c	87.2	As Expected	85.4	95.5	Higher	95.3
Serum Creatinine	85.6	As Expected	83.5	93.9	As Expected	95.1
Smoking	88.5	As Expected	90.4	95.6	As Expected	95.5
Urine Albumin	54.0	As Expected	52.3	48.6	Lower	66.2
All Eight Care Processes	**41.6**	**As Expected**	**42.9**	**41.1**	**Lower**	**58.8**

Source: NHS Digital - QOF

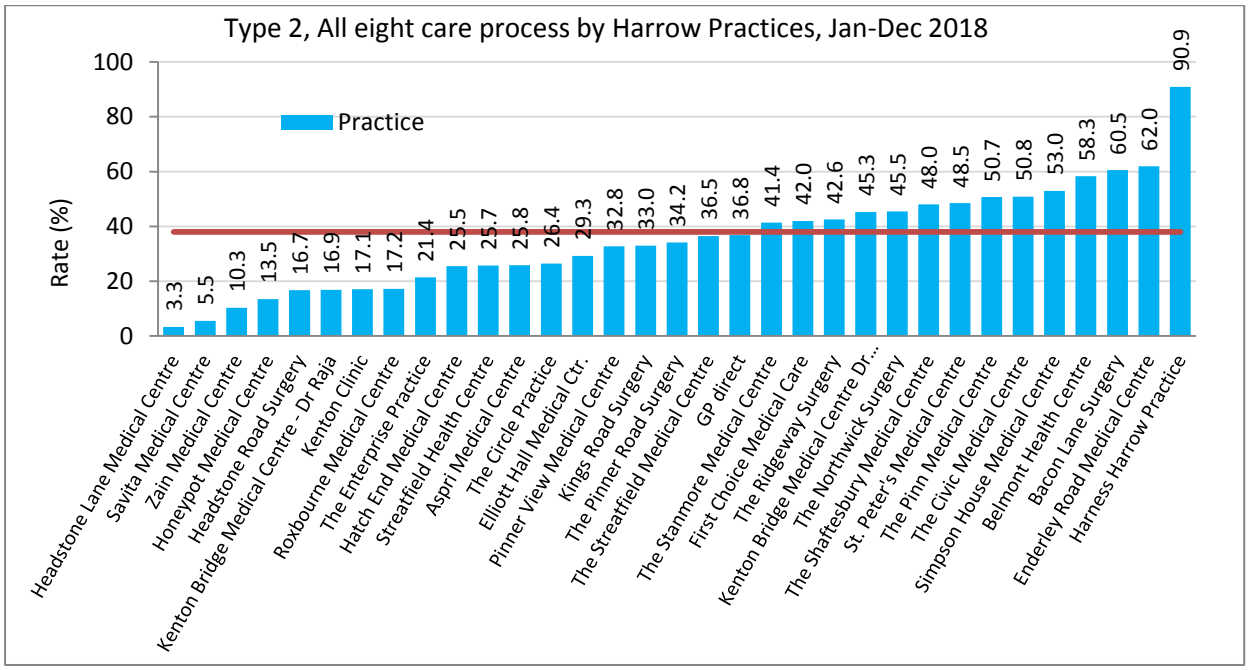
Percentage of people with type 1 and type 2 diabetes who received all 'Eight care process' by Harrow practices and Harrow average from January to December 2018 is presented in Fig 9 and 10. In Fig 9 there are four practices with Zero percentage outcome. We are not entirely sure if it is related to the process of reporting and communications between those practices and 'acute team'; as type 1 patients are likely under the care of acute teams, and the data may not have got back to the practice.

Fig 9 Type 1 diabetes, all eight care process by Harrow Practices and Harrow average, Jan-Dec 2018



Source: National Diabetes Audit 2018-19 quarterly report for England, CCG and GP practices - provisional

Fig 10 Type 2 diabetes, all eight care process by Harrow Practices and Harrow average, Jan-Dec 2018



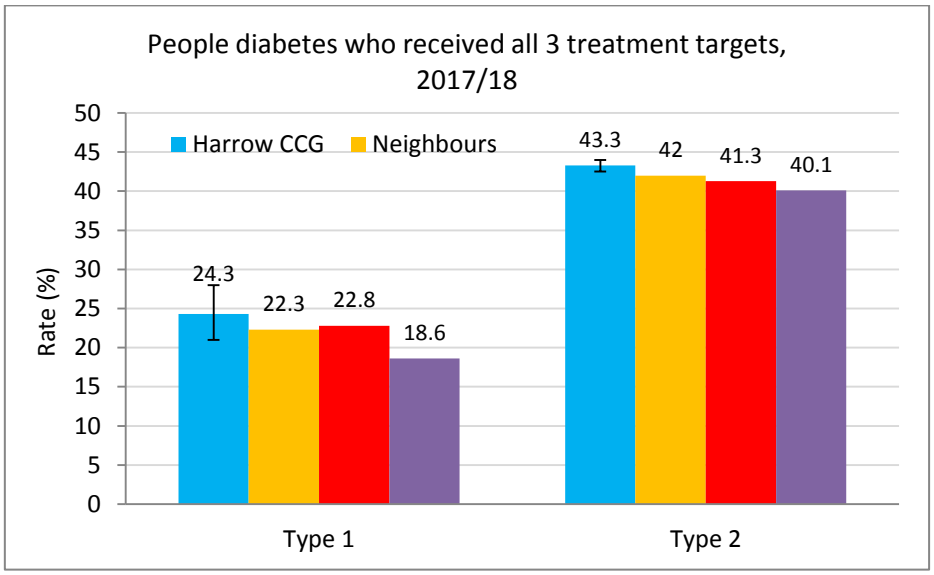
Source: National Diabetes Audit 2018-19 quarterly report for England, CCG and GP practices - provisional

Three treatment targets

NICE recommends treatment targets for HbA1c (glucose control), blood pressure and serum cholesterol. In 2017/2018 the percentage of people meeting all three treatment targets for type 1 diabetes in NHS Harrow CCG was 24.3%, significantly higher than England rate of 18.6%. In people with type 2 diabetes, 43.3% met all three treatment targets in Harrow CCG which is also significantly

higher than the England rate of 40.1% (Fig 11). A breakdown of the three treatment targets for type 1 and 2 diabetes for Harrow CCG, Nearest Neighbour Average (NAA), STP and England is also presented in Table 2.

Fig 11 People with type 1 and 2 diabetes who met all 3 treatment targets, Harrow CCG, Neighbours, London and England, 2017/18



Source: PHE, Public Health Outcome Framework (PHOF) – Fingertips, Diabetes

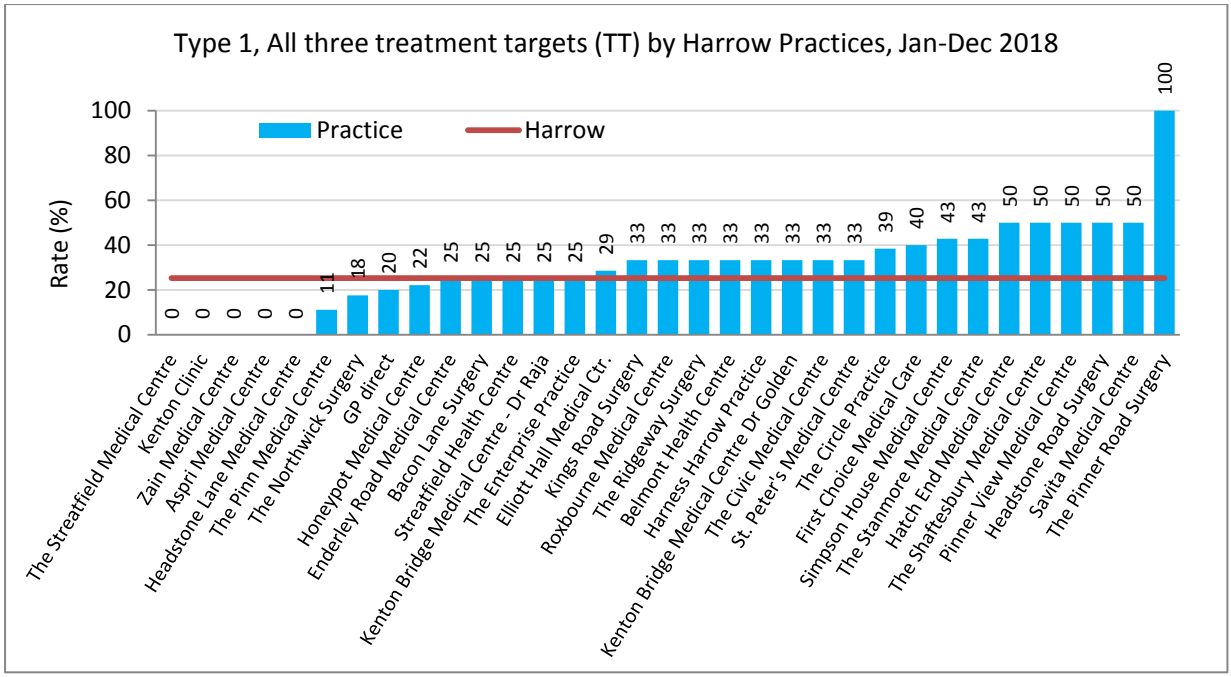
The percentage of people with type 1 diabetes who achieved the blood glucose target of ≤58 mmol/mol (7.5%) in Harrow CCG was 35.4% significantly higher than England rate of 29.9%. The percentage of people with type 2 diabetes who achieved the blood glucose target of ≤58 mmol/mol (7.5%) in Harrow CCG was 68.3% compared to 65.8% in England, which was also significantly higher. For the treatment target 'blood pressure <= 140/80' for type 2 diabetes patients also Harrow CCG has a significantly higher rate than England. For all other treatment targets, the target rate was similar to England (Table 2).

Table 2 Percentage of people meeting all three treatment targets for type 1 and 2 diabetes, Harrow, Nearest Neighbour Average (NNA), STP and England, 2017/2018

Three treatment targets	Type 1 Diabetes				Type 2 Diabetes			
	Harrow	NNA	STP	England	Harrow	NNA	STP	England
HbA1c <= 58 mmol/mol (7.5%)	35.4	34	36.5	29.9	68.3	66.2	66.8	65.8
Blood Pressure <= 140/80	74.2	79	77.8	74.8	76.1	75.7	74.8	73.8
Cholesterol < 5 mmol/L	71.3	71	71.4	70.3	78	77.5	78.1	75.6
All Three Treatment Targets	**24.3**	**22.2**	**23.9**	**18.6**	**43.3**	**41.8**	**42.1**	**40.1**

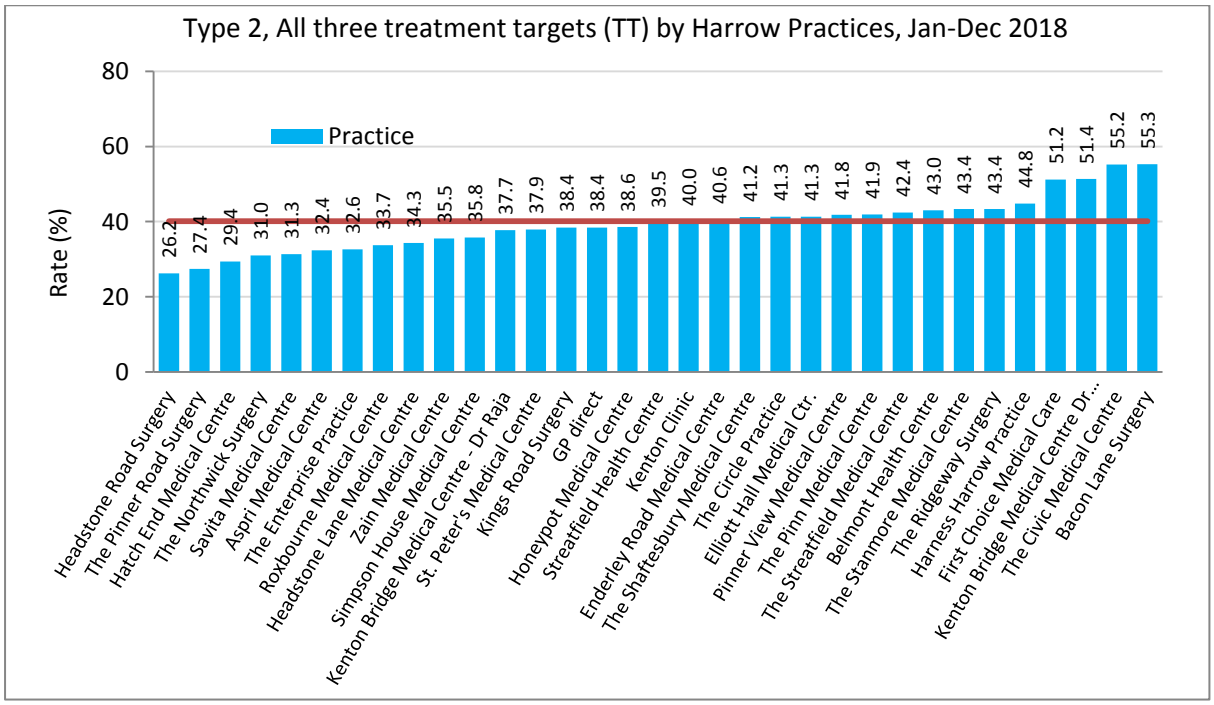
Percentage of people with type 1 and type 2 diabetes who met all 'three treatment targets' by Harrow practices and Harrow average from January to December 2018 is presented in Fig 12 and 13.

Fig 12 Type 1 diabetes, all three TT by Harrow Practices and Harrow average, Jan-Dec 2018



Source: National Diabetes Audit 2018-19 quarterly report for England, CCG and GP practices - provisional

Fig 13 Type 2 diabetes, all three TT by Harrow Practices and Harrow average, Jan-Dec 2018

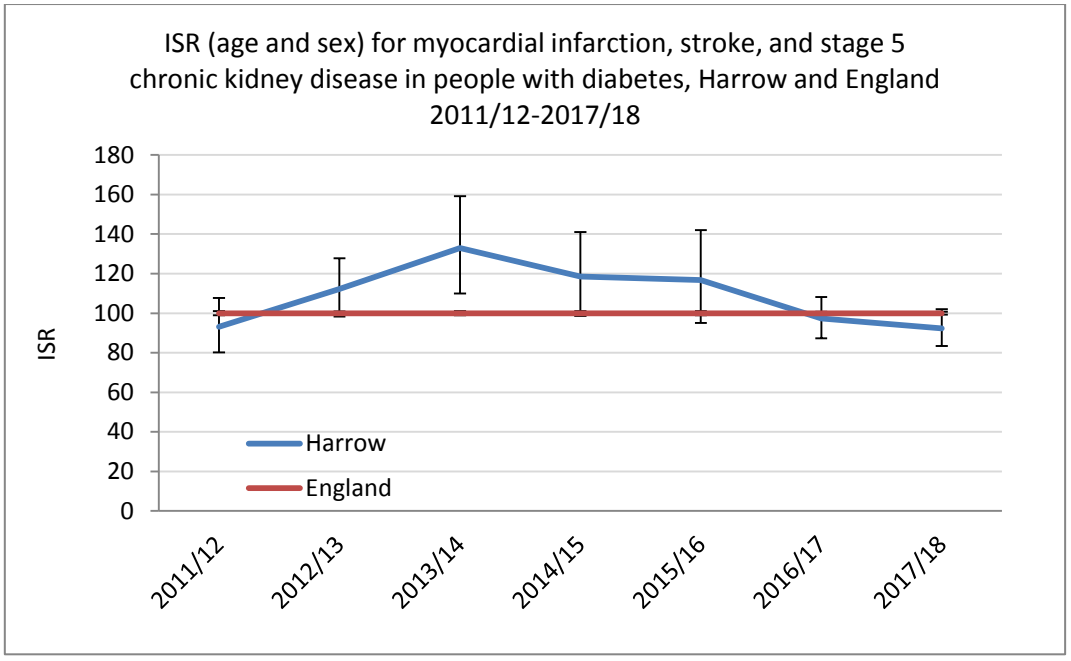


Source: National Diabetes Audit 2018-19 quarterly report for England, CCG and GP practices - provisional

Additional risk of complications

A person with diabetes has a higher risk of cardiovascular complications (heart attack, angina, heart failure and stroke) and microvascular (amputation and renal disease) complications. Fig 14 illustrates the 'Indirectly age and sex Standardised Ratio' (ISR) of people with diabetes who are subsequently admitted to hospital with myocardial infarction, stroke or end stage kidney disease in Harrow CCG from 2011/12 to 2017/18. It is considered useful in measuring the quality of commissioning for people with diabetes. The figure shows except for 2013/14 which Harrow CCG had a significantly higher rate of admission, for all other years the admission rate was similar to England average.

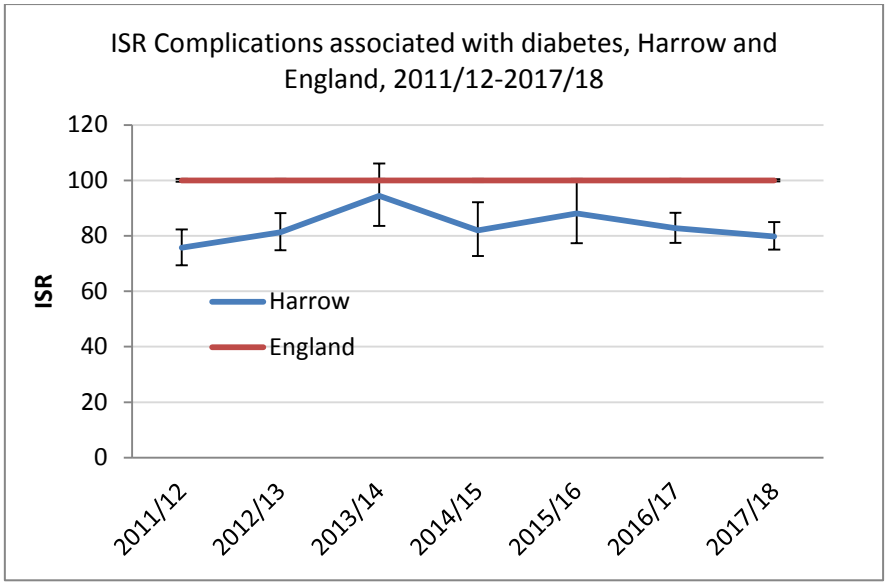
Fig 14 Indirectly age and sex standardised ratio (ISR) for myocardial infarction, stroke, and stage 5 chronic kidney disease in people with diabetes, (95% CI), Harrow and England, 2011/12-2017/18



Source: National Diabetes Audit (NDA), Hospital Episode Statistics (HES) Admitted Patient Care (APC)

Fig 15 illustrates the 'Indirectly age and sex Standardised Ratio' (ISR) of people with diabetes who are admitted to hospital with one or more complication in Harrow CCG from 2011/12 to 2017/18. It is considered useful in measuring the quality of commissioning for people with diabetes. The figure shows except for 2013/14 which Harrow CCG had a similar rate of admission, for all other years the admission rate was significantly lower than the England average.

Fig 15 Indirectly age and sex standardised ratio (ISR) of complications in people with diabetes, (95% CI), Harrow and England, 2011/12-2017/18



Source: National Diabetes Audit (NDA), Hospital Episode Statistics (HES) Admitted Patient Care (APC)

Based on the information provided by PHE, public health profile (fingertips), the rate of admissions for diabetes for children and young people aged under 19 years in Harrow CCG was similar to London and England average.

Mortality

Key findings of the National Diabetes Audit (NDA) 2015/16 report[1] indicate that:

- Diabetes remains responsible for a large number of additional deaths, with the greatest relative risk in younger people.
- Deaths in people with diabetes under the age of 80 years are more often due to cardiovascular disease than in the general population.
- The relative risk of cardiovascular disease in people with diabetes as compared to people without diabetes is increasing.

One year follow-up of the 2012/13 and 2013/14 audits shows that the additional risk of mortality for people with diabetes was 44.4% in NHS Harrow CCG; for England, the additional risk was 21.8%.

[1] National Diabetes Audit, 2015-16 Report 2a: Complications and Mortality (complications of diabetes), England and Wales, 13 July 2017, available at: https://www.hqip.org.uk/wp-content/uploads/2018/02/TIwCJZ.pdf (last accessed: 23/09/2019)

Services for people with diabetes

NHS Harrow CCG has worked with patients, providers, and fellow commissioners across North West London to produce an integrated service specification for prevention of Type 2 diabetes and treatment and care of people with diabetes.

NORTH WEST LONDON DIABETES INTEGRATED SERVICE SPECIFICATION

15. Appendix 2 – Tiers of services

Tier 1 - Primary Care **Those clinical situations that would be the responsibility of primary care** **On-going Care of people with Type 2 diabetes**	**Tier 2/3 - Specialist support in the community** **Those clinical situations where primary care would remain responsible for the care of the individual but where primary care would be able to access support** **On-going Care of people with Type 1 diabetes**		**Tier 4 - Specialist support in Secondary Care** **Those clinical situations where secondary care would be responsible for the care of the individual** **Specialist Care for time limited interventions**
Service Provision	**Service Provision**	**Who**	**Service Provision**
Type 2 Diabetes Prevention (Non-Diabetic Hyperglycaemia) Diabetes risk calculation Register maintenance Annual review and referral to NWL Diabetes Digital Hub	**Type 1 – diagnosis (unless inpatient)**	GP / DSN / Consultant / PN with competency ***as part of specialist team***	
	Routine type 1 care planning & co-ordination	GP / DSN / Consultant / PN with competency ***as part of specialist team***	
Type 2 Diabetes Management x2 HbA1c above 48 mmol/mol or fasting glucose 7mmol **Care planning & co-ordination** Annual review and supporting patients to receive the 9 diabetes care processes and mental health Care planning – goal setting and action planning **Medicines Optimisation** Initiating all oral medication and titrate in a timely manner Review for hypoglycaemia symptoms **Achievement of 3 NICE treatment targets** HbA1c ≤ target (variable), blood pressure ≤140/80, cholesterol ≤4mmol/L **Review within 3 months if off target** **Education & lifestyle advice** Referral to NWL Diabetes Digital Hub	**Support for complex patients:** • ED visits • Hospitalisation • HbA1c > Individualised target • Microalbumin > 30 • BMI > 35 for weight management **Specialist input:** • Insulin and GLP-1 initiation • Diagnostic uncertainty • Pre-pregnancy counselling • Psychological assessment, intervention and coaching where required **Group consultations** **T2DM remission programmes** **Diabetic foot protection team (community podiatry)** **Support for level 1 practices:** • Virtual clinics • Clinician mentoring • Advice	**MDT to consist of the following:** GP with competency Practice Nurse with competency Diabetes Specialist Nurse Consultant Diabetes Specialist Dietician Psychiatric nurse or doctor Clinical Psychologist/IAPT Health Coach Diabetes Mentor Practice based pharmacist Podiatry	Routine type 1 care planning & co-ordination Insulin pump initiation and management (type 1) Autonomic neuropathy e.g. gastroparesis (type 1) Antenatal care (diabetes patient becomes pregnant or gestational diabetes) HbA1c above target with CKD4/5 Transition service paediatrics to adults (up to 19yrs) In-patient care MDT management of active foot disease
	Eye service screening	NWL DESP (NHSE Commissioned)	

Currently Harrow does not have a Tier 1 service in primary care, and the Tier 2/3 service that is in place does not contain all of the healthcare professionals that would constitute a true multi-disciplinary team.

A business case is being developed for 2020/21 and beyond which will attempt to address these issues.

Future plan:

- To compare the observed risk of diabetes with expected by practice (and PCN) level
- To compare the rate of hospital admissions of the diabetes patients at practice (and PCN) level
- To estimate the prevalence of Non-Diabetic Hyperglycaemia by practice (and PCN)

Further information:

https://fingertips.phe.org.uk/profile-group/cardiovascular-disease-diabetes-kidney-disease

https://fingertips.phe.org.uk/profile-group/cardiovascular-disease-diabetes-kidney-disease/profile/diabetes-ft

https://fingertips.phe.org.uk/profile-group/cardiovascular-disease-diabetes-kidney-disease/profile/cardiovascular

Further information on diabetic footcare and amputation risk can be found in the diabetic foot care profiles: https://fingertips.phe.org.uk/profile/diabetes-ft