WHY IS THIS TOPIC IMPORTANT?

INTRODUCTION
Diabetes mellitus is one of the common endocrine diseases affecting all age groups with over one million people in the UK having the condition. Diabetes is caused when the amount of glucose in your blood is too high and your body is unable to use it properly. There are two main types of diabetes -

Type 1 diabetes occurs when the body is unable to produce insulin and usually has an early onset and appears before the age of 40. It is the least common of the two main types of diabetes and accounts for around 10% of all people with diabetes across the country. Type 1 diabetes is treated with daily insulin injections, a healthy diet and regular physical activity.

Type 2 diabetes occurs when either the body produces insufficient insulin or the body’s cells don’t react to insulin (known as insulin resistance). Historically, this type of diabetes commonly appeared in people over the age of 40, although this is no longer the case. In South Asian and African-Caribbean people, it can appear from a much earlier age with even children being diagnosed with this condition.

It is estimated that diabetes currently accounts for around 10% of the total NHS budget. Around 80% of those costs are due to diabetes-associated complications (as opposed to, for example, medication to maintain insulin levels). Research has shown that Type 2 diabetes alone cost the NHS £8.8bn in 2010/11 (with Type 1 costing an additional £1bn) (Hex and Bartlett et. al., 2012). In addition, costs relating to reduced productivity at work as a result of diabetes are estimated at nearly £9bn (Ibid).

This chapter primarily focuses on Type 2 diabetes; however, a chapter on Type 1 will be developed in conjunction with local support groups during 2017-18. Improving outcomes and experience of care for people with long term conditions, such as diabetes, is at the heart of Manchester’s Locality Plan for health and social care, which seeks to achieve a genuine shift in the focus of services towards prevention by intervening early to prevent existing problems getting worse and supporting people to self-care as well as transforming the city’s community based care system through the greater integration of health and social care.

NATIONAL PICTURE
The current prevalence in the UK indicates that over 3.27 million are affected with diabetes and a further estimated 600,000 people living with borderline diabetes who are undiagnosed.

Key risk factors
Obesity is the most serious risk factor for Type 2 diabetes. Obesity accounts for over 80% of Type 2 diagnosis in individuals and underlies the current global spread of the condition.
**People with a close family member who has Type 2 diabetes** are also more susceptible to developing the disease. The increasing prevalence of Type 2 diabetes in younger people can be attributed to the obesity epidemic in these age groups. For people living with Type 2 diabetes, obesity together with smoking and poor control of diabetes increases the risk for vascular complications.

**Deprivation** is strongly associated with higher levels of obesity, physical inactivity, unhealthy diet, smoking and poor blood pressure control. All these factors are inextricably linked to the development of Type 2 diabetes or the risk of developing serious complications for those already diagnosed. The most deprived people in the UK are 2½ times more likely to have diabetes at any given age. Diabetes UK report in 2012/13 (Diabetes in the UK) highlighted that women in England living in homes with the lowest income are over four time more likely to get Type 2 diabetes than women who live in homes with the highest income.

**Women experiencing gestational diabetes** have a 7% increased risk of developing Type 2 diabetes.

Type 2 diabetes is four times more prevalent in **South Asian communities**, who also tend to have more complications and increased mortality compared with the British white population.

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**IMPACT OF DIABETES**

Life expectancy is reduced, on average, by up to 10 years for people with Type 2 diabetes and it is estimated that 15% of deaths occurring in England can be attributed to diabetes. However, effective control and monitoring can reduce mortality and morbidity. When diabetes is controlled a person’s health is likely to be well maintained. However, if diabetes is not controlled it can have a serious impact on an individual’s health and lead to a range of chronic health conditions highlighted below:

**Cardiovascular disease** (includes heart disease and strokes) is a major cause of death and disability in people with diabetes, accounting nationally for 52% in people with Type 2 diabetes. Those with Type 2 diabetes have a two-fold increase risk of stroke within the first five years of diagnosis compared with the general population.

**Kidney disease** is more common in people who have diabetes and hypertension. Almost one in three people with Type 2 diabetes develops overt kidney disease. Diabetes is the single most common cause of end stage renal disease and accounts for 21% deaths in Type 1 diabetes and 11% in Type 2.

**Eye disease** called retinopathy is common in those with diabetes and can severely affect an individual’s eye sight. People with diabetes are 10 to 20 times more likely to go blind than people without. Diabetes is the leading cause of blindness in people of working age in the UK. It is estimated that there are 4,200 people in England who are blind due to diabetic retinopathy. Within 20 years of diagnosis nearly all people with Type 1 and almost two thirds of people with Type 2 diabetes have some degree of retinopathy. People with diabetes are twice more likely to suffer from cataracts or glaucoma than the general population.
**Amputations** of the lower limbs are most common in individuals with diabetes. People with diabetes account for just under half of lower limb amputations in adults with 100 amputations carried out each week. Around one in twenty people with diabetes will develop a foot ulcer in one year and more than one in ten foot ulcers result in the amputation of a foot or a leg. Up to 70% of people die within five years of having an amputation as a result of diabetes.

**Depression** is a common mental health condition associated with diabetes, the prevalence being twice as high as the general population. Coming to terms with the diagnosis, the development of a complication, the side effects of medication, or dealing with the daily responsibility of self-managing diabetes can take their toll on emotional wellbeing. As well as depression it can lead to anxiety, eating disorders, or phobias.

**Neuropathy** causes damage to the nerves that transmit impulses to and from the brain and spinal cord, to the muscles, skin, blood vessels and other organs. In men this can cause erectile dysfunction. Neuropathies (or nerve damage) may affect up to 50% of patients with diabetes. Chronic painful neuropathy is estimated to affect about one in six people with diabetes, compared with 1 in 20 in a similar matched group in the population.

Much of the management and monitoring of diabetic patients, particularly patients with Type 2 diabetes is undertaken by the GP and members of the primary care team.

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**THE MANCHESTER PICTURE**

**The Manchester picture: data**

The [Quality and Outcomes Framework (QOF)](https://www.nice.org.uk/guidance/qof) was introduced as part of the new General Medical Services (GMS) contract on 1 April 2004. The objective of the QOF is to improve the quality of care patients are given by rewarding practices for the quality of care they provide to their patients. As part of the QOF, GPs are required to establish and maintain a register of all patients aged 17 or over with diabetes mellitus, which specifies the type of diabetes where a diagnosis has been confirmed and to record data that reflects the quality of the care these patients are given.

The latest data for the financial year 2015/16 shows that there were 30,328 patients aged 17 and over recorded on the disease registers of GP practices in Manchester. This is equivalent to 6.3% of the registered population aged 17 and over. This is lower than the recorded prevalence of 6.6% for GP practices across England as a whole. The recorded prevalence of diabetes in all three of the CCGs in Manchester is also lower than the average for other similarly deprived CCGs in England (7.3%).

More recent data shows that, as at October 2016, there were 28,753 patients aged 17 and over on the diabetes registers of GP practices in Manchester - a prevalence rate of 5.9%.

It should be noted that published QOF data is not adjusted to take account of the age structure of the population and the fact that the recorded prevalence rate for diabetes across GP practices within Manchester appears to be lower than the national average and other similarly deprived areas is, in part, a reflection of the unusually young age structure of the registered population in Manchester.
QOF data can also be used to illustrate variations in the recorded prevalence of diabetes between CCGs and GP practices in Manchester. At CCG level, the recorded prevalence of diabetes ranged from 7.0% in North Manchester to 6.0% in Central Manchester and 5.9% in South Manchester. There are also large variations between GP practices within each CCG, as summarised in the table below.

Table 1: Recorded prevalence of diabetes (QOF) by CCG, 2015/16

<table>
<thead>
<tr>
<th>CCG</th>
<th>CCG average prevalence</th>
<th>Range of GP Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>High</td>
</tr>
<tr>
<td>North Manchester</td>
<td>7.0%</td>
<td>14.3%</td>
</tr>
<tr>
<td>Central Manchester</td>
<td>6.0%</td>
<td>10.6%</td>
</tr>
<tr>
<td>South Manchester</td>
<td>5.9%</td>
<td>10.6%</td>
</tr>
</tbody>
</table>

Source: Public Health England (PHE) Healthier Lives: Diabetes
(http://healthierlives.phe.org.uk/topic/diabetes)

These variations reflect differences in the age structure of patients registered with GP practices in Manchester and the prevalence of key risk factors for diabetes, such as ethnicity, deprivation and obesity, in the practice population as well as differences in diagnostic and coding practices within individual GP practices. Further information about variations in the prevention, care and outcomes for people with diabetes at CCG and GP practice level can be found on Public Health England’s Healthier Lives tool for diabetes.

Published data shows that the recorded prevalence of diabetes among patients registered within GP practices in Manchester has increased by 0.14 percentage points between 2014/15 and 2015/16. This compares with an increase of 0.18 percentage points across England as a whole. The increase in recorded prevalence rate in Manchester is equivalent to an increase of around 1,670 more patients on a GP practice diabetes register.

Table 2: Trends in recorded prevalence of diabetes (QOF) by CCG, 2012/13 - 2015/16

<table>
<thead>
<tr>
<th>Year</th>
<th>North Manchester CCG</th>
<th>Central Manchester CCG</th>
<th>South Manchester CCG</th>
<th>England</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012/13</td>
<td>6.2%</td>
<td>5.6%</td>
<td>5.6%</td>
<td>6.0%</td>
</tr>
<tr>
<td>2013/14</td>
<td>6.4%</td>
<td>5.6%</td>
<td>5.7%</td>
<td>6.2%</td>
</tr>
<tr>
<td>2014/15</td>
<td>6.7%</td>
<td>5.8%</td>
<td>6.0%</td>
<td>6.4%</td>
</tr>
<tr>
<td>2015/16</td>
<td>7.0%</td>
<td>6.0%</td>
<td>5.9%</td>
<td>6.6%</td>
</tr>
</tbody>
</table>


Between 2014/15 and 2015/16, the recorded prevalence rate of diabetes increased in both North and Central Manchester CCGs (by 0.28 and 0.20 percentage points respectively) but fell by 0.8 percentage points in South Manchester CCG. However, in all three CCGs the numbers of patients on a GP practice diabetes register have increased.

It is difficult to interpret year-on-year changes in the size of QOF registers. For example, a gradual rise in QOF prevalence could be due partly to epidemiological factors (such as an ageing population) or to increased case finding and recording.
QOF registers are constructed to underpin indicators on quality of care and they do not necessarily equate to prevalence as may be defined by epidemiologists. For this reason, prevalence figures based on QOF registers may differ from prevalence figures from other sources because of coding or definitional issues.

The national diabetes prevalence model provides estimates of the total (i.e. diagnosed and undiagnosed) prevalence of diabetes in people aged 16 years and over in England. The model was developed using data from the latest three years of Health Surveys for England (2012, 2013 and 2014) and takes into account the age, sex, and ethnic group distribution, as well as deprivation, of the area.

Table 3: Estimated prevalence of diabetes and diagnosis rate by CCG, 2015

<table>
<thead>
<tr>
<th>CCG</th>
<th>Estimated prevalence</th>
<th>Recorded prevalence</th>
<th>Diagnosis rate</th>
<th>Undiagnosed population</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Manchester</td>
<td>13,163 (8.4%)</td>
<td>11,067 (7.0%)</td>
<td>84.1%</td>
<td>2,096</td>
</tr>
<tr>
<td>Central Manchester</td>
<td>15,106 (8.4%)</td>
<td>10,969 (6.0%)</td>
<td>72.6%</td>
<td>4,137</td>
</tr>
<tr>
<td>South Manchester</td>
<td>10,375 (7.5%)</td>
<td>8,292 (5.9%)</td>
<td>80.0%</td>
<td>2,083</td>
</tr>
</tbody>
</table>

Comparisons with the 2014/15 Quality and Outcomes Framework suggest that 78.5% of people with diabetes registered with GP practices across Manchester as a whole have been diagnosed and are included on a diabetes register (the diagnosis rate). This compares with around 76.0% of people nationally. Within the city, the diagnosis rate ranges from 84.1% in North Manchester to 80.0% in South Manchester and just 72.6% in Central Manchester. Based on the same set of figures, it is estimated that there are just over 8,300 people with diabetes in Manchester that are undiagnosed.

Data from the national diabetes prevalence model suggests that, by 2025, there will be around 44,330 people with diabetes (diagnosed and undiagnosed) registered with GP practices across Manchester as a whole - an increase of nearly 5,700 people or 14.7% (see table below).

Table 4: Estimated future prevalence of diabetes by CCG, 2015 to 2025

<table>
<thead>
<tr>
<th>CCG</th>
<th>2015</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Prevalence (%)</td>
</tr>
<tr>
<td>North Manchester</td>
<td>13,163</td>
<td>8.4%</td>
</tr>
<tr>
<td>Central Manchester</td>
<td>15,106</td>
<td>8.4%</td>
</tr>
<tr>
<td>South Manchester</td>
<td>10,375</td>
<td>7.5%</td>
</tr>
<tr>
<td>Manchester</td>
<td>31,781</td>
<td>7.5%</td>
</tr>
</tbody>
</table>

The total number of people with diabetes resident in Manchester is estimated to increase from 31,781 (or 7.5% of the population) in 2015 to 36,355 (8.0% of the population) by 2025. This is equivalent to an additional 457 people a year.

These estimates have been produced using the 2014-based population projections produced by the ONS. They assume no change in the age, sex and ethnic specific
prevalence rates of diabetes or in the proportion of people who are overweight or obese. Please note that estimating this far into the future introduces additional level of uncertainty and therefore it is advised that these estimates are used with caution.

The Diabetes Prevalence Model indicates that, nationally, CCGs with the highest estimated diabetes prevalence also have high proportions of South Asian and black ethnic groups and high levels of deprivation. There is also a clear association between increasing age and higher diabetes prevalence. This is supported by the data in the table below.

Table 5: Diabetes risk factors by CCG

<table>
<thead>
<tr>
<th>CCG</th>
<th>Deprivation (IMD 2015)</th>
<th>People aged over 65</th>
<th>Obesity (adults 16+)</th>
<th>Asian/Asian British population</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Manchester</td>
<td>46.7</td>
<td>10.7%</td>
<td>8.8%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Central Manchester</td>
<td>39.7</td>
<td>7.4%</td>
<td>6.6%</td>
<td>25.3%</td>
</tr>
<tr>
<td>South Manchester</td>
<td>35.0</td>
<td>11.6%</td>
<td>7.2%</td>
<td>9.4%</td>
</tr>
</tbody>
</table>

North Manchester has the highest recorded prevalence of diabetes and also has highest levels of deprivation and obesity. Central Manchester has the largest proportion of people from an Asian/Asian British background within its population but has a much younger population as well as a lower prevalence of obesity among adults aged 16 and over. South Manchester contains the highest proportion of older people 65 and over but has the lowest levels of deprivation and a much smaller Asian/Asian British population.

The Manchester picture: lived experience

In December 2016 patients from across north, central and south Manchester took part in a survey to understand patient experiences of living with Type 2 Diabetes in Manchester. Patients were informed that their experiences would be used to improve community services throughout Manchester. Over 80% of the patients surveyed had lived with Diabetes for over 1 year, with over 50% living with Diabetes for over 5 years.

Medication

Patients were asked whether their diabetes is managed with medication, in the form of insulin or tablets or managed with diet and lifestyle. The graph below shows that 60% of patients confirmed that they managed their diabetes with tablets.
Education and information

Patients were asked if they received information or education about their condition. The majority attended an education programme provided at either their GP practice, local hospital or within their local community. Over 90% of patients stated that they had received information about their condition and that it was easy to read and understand.

Yearly Treatment Reviews

Over 90% of patients confirmed that they had attended a yearly review with a healthcare professional. This was performed either by their GP, a practice nurse, diabetic specialist or diabetic consultant. However, over 20% of patients confirmed that they had experienced difficulty in obtaining an appointment for their diabetic care. The following graph displays the healthcare providers that patients experienced difficulties in accessing:

- Over 80% of patients said they were happy with the treatment they had received at their most recent eye screening appointment.
- 65% of patients said that they had not had an appointment with a dietician.
- 11% of patients said that they had been admitted to hospital as a result of complications with their diabetes.
- Over 50% of patients said that if they needed support to manage their diabetes they would seek advice from their GP or diabetic nurse specialist.
- 57% of patients said that they would like to keep a personal record of their diabetic blue glucose readings.
- 77% of patients said that their preferred method of communication for their diabetic condition would be face to face with a clinician.

Recommendations
The key findings from the survey were:

- Patients would like to be offered information programmes on initial diagnosis and feedback suggests that classes need to provide consistent information across Manchester.
- Classes need to offer flexible opening times to support people who are working.
- Class sizes need to be managed to ensure that all participants benefit and can contribute to the programme.
- Patients would like support classes to be available through their GP surgeries.

WHAT WOULD WE LIKE TO ACHIEVE?

Manchester’s objectives are to:

- Reduce the onset of type 2 diabetes
- Improve the diagnosis rate of known patients with diabetes recorded on GP registers
- Reduce the number of patients with diabetes who go undiagnosed
- Reduce the variation in management between different areas and GP practices within Manchester
- Maximise uptake of clinical and non-clinical interventions highlighted in NICE guidance and National Service Framework for Diabetes (see next section)
- Tackle risk factors (e.g. obesity) in order to address the expected increase in the level of diabetes in Manchester over the next 10-years.

NHS RightCare has produced a number of useful reports and data packs for local areas across the country. This includes local data on diabetes. Diabetes data can be found in both the long term conditions pack and the CVD focus pack. A key objective for Manchester is to reduce cost and spend on diabetes in line with our peers, a set out in the RightCare analysis.

WHAT DO WE NEED TO DO TO ACHIEVE THIS?

STRATEGIC APPROACH TO EFFECTIVE INTERVENTIONS

The Diabetes Type 2 NICE Guidelines 14 (2008) highlighted a range of clinical and non-clinical interventions, which could keep diabetes under control and to prevent the range of complications occurring. A summary of the interventions are described below:

**Education** - offering structured education to every person with Type 2 diabetes together with their significant other such as partner or carer at or around the time of diagnosis. NICE guidance states that the education available should meet the cultural, linguistic, cognitive, and literacy needs of the local population within a given locality and the
education programme should meet the criteria laid down by the Department of Health and Diabetes UK Patient Education Working Group.15

**Diet** - Providing individualised and on-going healthy eating advice from a healthcare professional with expertise in this area is another key element of support for individual with Type 2 diabetes. NICE guidance recommends that the advice needs to be sensitive to the individual’s needs, culture and beliefs as well as being sensitive to their willingness to change, and the effects on their quality of life. The advice needs to be given in the context of a lifestyle modification plan to include increasing physical activity and weight loss if appropriate.

**Blood glucose control** - A key issue for an individual who has Type 2 diabetes is to maintain a healthy level of glucose in their blood. In some cases this can be solely managed by a person adopting a healthy lifestyle. However, it often requires both medical interventions (usually tablets) and the adoption of a healthy lifestyle to bring down the glucose to safe levels in the blood.

The table below shows the percentage of people with diabetes aged 17 and over registered with GP practices in the 3 Manchester CCGs whose blood glucose (sugar), blood pressure and cholesterol levels are well controlled, based on data for 2015/16.

<table>
<thead>
<tr>
<th></th>
<th>North Manchester CCG</th>
<th>Central Manchester CCG</th>
<th>South Manchester CCG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good blood sugar control</td>
<td>59.2%</td>
<td>57.0%</td>
<td>58.8%</td>
</tr>
<tr>
<td>Good blood pressure control</td>
<td>70.5%</td>
<td>68.7%</td>
<td>65.8%</td>
</tr>
<tr>
<td>Good cholesterol control</td>
<td>70.2%</td>
<td>71.4%</td>
<td>67.3%</td>
</tr>
</tbody>
</table>


NICE guidance recommends that individuals are fully involved in the management of their disease to help them to take decisions about the control of their diabetes. It is recommended that individuals understand the target level of glucose in the blood they should be aiming for to keep healthy. The blood test which measures the levels of glucose in the blood is called HbA1c and identifies the levels of glucose over a 3 month period. When a person is initially diagnosed it is recommended that regular measurement of the glucose levels on at least 2-6 monthly take place to reinforce the importance of meeting the target level and to achieve stability in the disease.

**Mental Health** - NICE guidance recognises that people with Type 2 diabetes may develop psychological and/or depressive disorders which should be managed by professionals in accordance with current national guidelines (NICE Guidance CG 23 Managing Depression in Primary and Secondary Care 2009). Data from the Health and Social Care Information Centre / QMAS for 2011-2012 highlighted the fact that over 88% of those diagnosed with diabetes and/or coronary heart disease in London had at least one or more episodes of depression in the previous 15 months.

**Annual Reviews** - NICE guidance recommends that all those with Type 2 diabetes should be seen on at least a yearly basis in general practice where an agreed care plan is discussed which involves extended family and carers where possible. The
annual review will provide regular surveillance for long-term complications with timely, appropriate and effective investigation and treatment of long-term complications of Type 2 diabetes.

The following areas of assessment at the annual care plan are considered essential:

- **A cardiovascular review:** Measurements to diagnose any cardiovascular problems should take place on a yearly basis at the annual review including the measurement of blood pressure.
- **A renal review:** All people attending the annual diabetes review should bring in a first pass morning urine sample. This specimen should be used to provide the estimate for the albumin: creatinine ratio which can indicate any kidney dysfunction.
- **An eye test:** The annual review should reinforce to the individual the importance of getting their eyes tested on a yearly basis to detect any deterioration to the eye sight which may require medical attention.
- **An assessment of feet:** As part of annual review, trained staff should examine the individual’s feet to detect risk factors for ulceration. They should be able to classify the risk to give the appropriate advice and recommendation for treatment if required.
- **A neuropathy assessment:** During the annual review a formal enquiry should take place on the development of neuropathic symptoms which may be causing distress. The professionals conducting the review need to be alert to the psychological consequences of chronic painful diabetic neuropathy and offer psychological support according to the needs of the individual.
- **A review of erectile dysfunction:** This issue should be review annually with men and provide assessment and education to address contributory factors and treatment options.

**Supportive measures for those living with Type 2 Diabetes**

The following wider recommendations were made in the National Service Framework for Diabetes19, published in 2001, but are still relevant today:

- Ensure services are planned to meet the needs of the population, including specific groups within the population, and are appropriate to individuals’ needs.
- Draw on knowledge and skills of health and social care professionals across a multidisciplinary diabetes health care team, including primary care and social care as well as specialist services.
- Narrow the inequalities gap between those groups whose outcomes are poorest and the rest; minimising the risk of developing diabetes and its complications and maximising the quality of life for individuals by empowering staff to deliver, evaluate and measure care.
- Increase awareness of the symptoms and signs of diabetes among both health professionals and the general public to support earlier identification of people with diabetes.
- Follow up and regular testing of individuals known to be at increased risk of developing diabetes (people who have previously been found to have impaired glucose regulation and women with a history of gestational diabetes) can lead to the earlier diagnosis of diabetes.
• Raise awareness of the symptoms and signs of diabetes among the public, particularly among sub-groups of the population at increased risk of developing diabetes.
• Develop local plans to ensure that health and other professionals most likely to come into contact with people with undiagnosed diabetes are aware of the symptoms and signs of diabetes.
• Develop and monitor agreed protocols for rapid and effective treatment of diabetic emergencies by appropriately trained health care professionals.
• Review systems to ensure when people with pre-existing diabetes are admitted to hospital, they continue to receive effective diabetes care and continue to manage their own diabetes wherever possible.
• Develop partnerships at all levels of care: between patients, their carers and families, and NHS staff; between the health and social care sectors; across different government departments; between the public sector, voluntary organisations and private providers to ensure a patient-centred service.

WHAT ARE WE CURRENTLY DOING?
A range of initiatives are taking place across Manchester to address Type 2 diabetes covering the following areas:

• Primary prevention - focusing on the population who are at high risk of Type 2 diabetes
• Secondary prevention - focusing on the population with Type 2 diabetes and the initiatives to maintain their health and to prevent further complications
• Tertiary care - focusing on the population with Type 2 diabetes experiencing complications and the initiatives to maintain optimum health.

Prevention/Early Detection
People with obesity are at high risk of getting Type 2 diabetes have access to a range of healthy lifestyle services tackling obesity, physical activity and health eating.

The NHS Health Check programme managed by Manchester City Council Public Health Team and a number of general practices across the city targets people aged 40-75 years with no pre-existing condition. This check includes the calculation of an individual's risk of getting diabetes within the next 10 years and is a key initiative for identifying individuals who already have Type 2 diabetes but who have not previously been diagnosed.

North Manchester CCG has piloted a diabetes prevention programme (“You First”) across North Manchester. The programme is designed to deliver behaviour change interventions to those identified as pre-diabetic (i.e. at risk of developing Type 2 diabetes) with the aim of supporting individuals to reduce their risk of diabetes (based on their HBA1C score) significantly enough that they fall into the ‘Normal’ range, thus preventing the development of Type 2 Diabetes. An interim evaluation of the pilot carried out by the New Economy showed that 37% of patients for whom data was available had reduced their HbA1c score to within normal range and 57% had lost 5% of their body weight. A Cost Benefit Analysis (CBA) carried out as part of the evaluation estimated a Net Present Budget Impact (i.e. a net saving) of £162,097.97 over a full 12 month period.
and a financial return on investment of £2.65 for every £1 invested, based on a payback period of three years.

Manchester CCG will be participating in 2nd wave of the National Diabetes Prevention Programme (NDPP) from 2017. The programme will provide individuals with tailored, personalised help to reduce their risk of Type 2 diabetes, including education on healthy eating and lifestyle, help to lose weight and bespoke physical exercise programmes, all of which together have been proven to reduce the risk of developing the disease.

Secondary prevention
For people living with Type 2 Diabetes registered with a general practice in Manchester the following activities are in place

NORTH MANCHESTER
North Manchester CCG has commissioned diabetes specialist nurses in the community to support patients with unstable diabetes and support General Practice with the management of diabetes in their practice population. The CCG is also working with Pennine Acute Hospital Trust to develop an outreach model to support patients most at risk of admissions with access to consultant opinion.

The CCG has commissioned local Voluntary Sector organisations to support and deliver diabetes safer fasting campaigns, which included raising awareness with local BME population on the management of diabetes though education and awareness sessions, road shows, working with community leaders and utilising local media. They have also been commissioned to develop material that will support future communication campaigns.

Structured Education
North Manchester CCG commission a community structured diabetes education called DESMOND which is delivered by Community Diabetes Specialist Nurses and Dieticians from the Weight Management Service. Sessions are delivered from different sites in North Manchester.

The CCG has also worked with local clinicians and Voluntary Sector to develop a curriculum for diabetes education that is suitable for non-English speaking BME population. The sessions are currently delivered by Northern Health working closely with local Voluntary Sector Organisations.

DAFNE (Dose Adjustment For Normal Eating) is provided by Pennine Acute Hospitals NHS Trust (PAHT). DAFNE provides a five-day diabetes education program for adults with type 1 diabetes. The program covers carbohydrate counting and adjusting insulin doses, as well as how to manage exercise, illness and hypoglycaemia. This allows greater lifestyle freedom and improves diabetes control.

CENTRAL MANCHESTER
A Long Term Conditions (LTC) programme is in place across the GP practices with the aim of improving the prevalence, recording and overall management of patients LTC which includes diabetes to allow clinical optimisation, improved self-management and improved identification. This will ensure an improved distribution and utilisation of services in both primary and secondary care.
The majority of patients with heart failure (HF) also develop diabetes. Collaborative work between Central Manchester Hospitals Foundation Trust (CMFT) and Central Manchester CCG is underway to look at routine testing of patients undiagnosed with diabetes to increase recorded prevalence, improve management and reduce emergency admissions.

Patients with HF are to be seen by specialists; therefore patients are routinely reviewed and given specialist care. A structured diabetes education programme to support patients to manage their own condition and reducing modifiable risk factors a requirement of the General Practices’ Quality and Outcomes Framework (QOF) will be further developed to give patients greater physiological knowledge of how diabetes impacts other conditions. Integrating all of the services and care models is the next step within Central Manchester.

SOUTH MANCHESTER
South Manchester CCG has worked with the University Hospital NHS Trust South Manchester (UHSM) and has developed a South Manchester Integrated Diabetes Service to encourage care delivery outside of a hospital setting. The service specification is being implemented by UHSM. This combines with the service specification for the integrated community nursing service (ICNS).

Diabetes care is to be delivered via a much more integrated model, with a seamless transition for patients between self-care, primary, community and secondary care. This approach requires proactive/ preventative management in primary care and the need to drive up quality and reduce variation across practices.

The specialist team also hold case notes review sessions for GPs and practice nurses, for discussion of diabetes queries, to develop expertise within the community. These are supplemented by structured education sessions to up-skill primary care and develop confidence to manage more complex patients in the community.

- A local GP has started joint community clinics with a GP / Consultant to discuss practice diabetic patients. This has led to valuable learning on the management of patients.
- South Manchester is focusing on achieving the Quality Premium on Diabetes.

OPPORTUNITIES FOR ACTION

Manchester Citywide Diabetes Approach
The three Manchester CCGs have met to develop an overview of the service models currently available in North, Central and South Manchester and identify the gaps in the management of Type-2 diabetes. General Practices have been commissioned though the Manchester Standards to review and improve the 8 processes of care as part of a city wide approach to address variation. Work is being underpinned by a review of the supporting data available for diabetes care, including:
- Diabetes outcome activity in primary care and performance improvement data.
- Secondary care performance data for each CCG and hospital trusts for first outpatients, follow up outpatient rates and A&E attendance including ambulatory conditions using the “Rightcare” approach.
- Update on Medicines Optimisation identifying areas to focus on and understand what support can be provided.

**Increased Participation in National Diabetes Audit (NDA)**
A concentrated effort by the Clinical Commissioning Groups (CCGs), the clinical leads and GP Practices has enabled Manchester to increase the GP participation in the National Diabetes Audit (NDA) from 44% in 2015 to 93% in 2016.

This opens up a number of important opportunities moving forward and tackling diabetes as high participation:

- Enables an accurate reflection of diabetes health and service provision across Greater Manchester and Eastern Cheshire.
- Identifies areas of good practice.
- Enables more effective planning and support to be directed to the areas with the highest need.

**Prevention of type 2 diabetes**
All of Greater Manchester will start to offer behavioural interventions to people at risk of developing Type 2 diabetes from April 2017. This follows a successful bid led by the Strategic Clinical Network to incorporate a further eight areas into the NHS Diabetes Prevention Programme (NHS DPP). Bolton, Wigan, Trafford, Tameside, Stockport, North, Central and South Manchester will now join Bury, Oldham, Heywood, Middleton and Rochdale and Salford in identifying and managing people suitable for intervention.

A Greater Manchester partnership consisting of all boroughs will strive to not only reduce the prevalence of Type 2 diabetes but reduce unnecessary variation in service provision.

**Network Diabetes Programme 2016/17 and 2017/18**
The Strategic Clinical Network (SCN) is co-ordinating the 2nd wave of diabetes prevention programme. In addition, all Greater Manchester areas will work together to agree, plan and co-ordinate a strategic approach to preventing Type 2 diabetes. This will be done primarily through the newly formed Greater Manchester Diabetes Prevention Steering Group where membership is made up from local leaders and senior responsible officers.

Manchester CCGs will be looking to work with SCN to improve on the 4 key areas of treatment of care:

- Structured education
- Patient Centred Care
- Health care Professional Training
- Lower Limb early assessment.
REFERENCES AND LINKS

NHS UK
http://content.digital.nhs.uk/qof
http://www.content.digital.nhs.uk/catalogue/PUB22266

Public Health England (PHE) - Diabetes prevalence model for local authorities and CCGs

Public Health England (PHE) - Diabetes profile
https://fingertips.phe.org.uk/diabetes

Public Health England (PHE) - Healthier Lives: Diabetes
http://healthierlives.phe.org.uk/topic/diabetes

National References
http://guidance.nice.org.uk/PH35
http://www.yhpho.org.uk

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It is hoped that you have found this topic paper useful. If you have any comments, suggestions or have found the contents particularly helpful in your work, it would be great to hear from you.

Responses can be sent to jsna@manchester.gov.uk