## CONTENTS

- **Foreword**
  - Page 4
- **Executive summary**
  - Page 5

### Section 1  Background and context

1.1 What is Diabetes?  
1.2 Geography  
1.3 Social determinants of health  
1.4 CCG Improvement and Assessment Framework  
1.5 Future prevalence of diabetes in the Norfolk and Waveney STP area  
1.6 Comorbidity  

### Section 2  Performance data

2.1 Care processes  
2.2 Treatment targets  
2.3 Structured education  
2.4 Paediatric Diabetes Audit  
2.5 Diabetic Footcare Audit  
2.6 Diabetes in Pregnancy Audit  
2.7 National Diabetes Inpatient Audit (NADIA)  
2.8 Five Year Forward View for Mental Health  

### Section 3  Vulnerable Groups

3.1 Children and young people  
3.2 Frail elderly people, including those resident in care homes  
3.3 People at risk of cognitive impairment or dementia  
3.4 People with learning difficulties  
3.5 People with physical disability, including sensory impairment  
3.6 People with severe mental illness  
3.7 Hard to reach communities  
3.8 People with eating disorders  

### Section 4  The future vision

4.1 STP diabetes vision statement  
4.2 Overarching goals for diabetes services  
4.3 Key elements for new service models  

### Section 5  Enablers

5.1 NHS Diabetes Prevention Programme (NDPP)  
5.2 NHS RightCare  
5.3 NHS England Transformation Funding  
5.4 NICE Quality Standards  
5.5 Make Every Contact Count  
5.6 NHS Five Year Forward View  
5.7 NHS Five Year Forward View for Mental Health  

### Section 6  Barriers to implementation

6.1 Delivery risks and issues
Section 7  Programme governance
7.1  Diabetes Programme Board
7.2  STP Governance

Section 8  Appendices
Appendix 1 – Outcomes against spend by CCG
Appendix 2 – Communications plan
Appendix 3 – Terms of reference for the Diabetes Programme Board
Appendix 4 – Useful resources
Appendix 5 – RightCare packs for diabetes
Appendix 6 – Public Health England Fingertips data by CCG
Appendix 7 – What is Social Prescribing?
Appendix 8 - What services are local pharmacies already commissioned to provide?
Appendix 9 – Key contacts
Foreword

Development of the Norfolk and Waveney STP Diabetes Strategy has been supported by a great many people, including those living with diabetes, people caring for or representing people living with diabetes, a multidisciplinary team of healthcare professionals from different backgrounds across community, primary and secondary care, our partners in social care, voluntary sector organisations supporting people living with diabetes, NHS support staff and commissioners.

Our aim has been to create a comprehensive, clinically led vision for best practice, for people of all ages, regardless of background or circumstances and encompassing all elements of diabetes care, from the public health aspects of diabetes prevention right through to the clinical support of those unfortunate enough to develop the most complex of diabetes-related complications. We aim to promote holistic, person-centred care and to provide support to empower people living with diabetes, recognising that people with diabetes live with their diabetes all day, every day and face many stressors and challenges in everyday life that impact on health and wellbeing, as well as diabetes care. We will continue to involve people living with diabetes in the implementation of this strategy and in service development. Key aims will require clinical consensus to improve standards and reduce variance in clinical practice, addressing health inequality. We recognise the need to promote partnership working and to improve integration across organisations to ensure a more seamless approach and, where possible, to improve accessibility to services and sharing of expertise to better support the care of people living with diabetes, as well as enhancing professional support for healthcare and other professionals providing care for people living with diabetes. We understand the importance of technological innovations that contribute to supporting clinical care both at individual and service level and aim to evaluate and promote the use of such tools where resources allow.

Implementing our strategy and aiming for the highest standards in diabetes care throughout Norfolk and Waveney will take time and require a great deal of work and investment. Our vision is ambitious and it is likely that we will encounter many challenges. Scientific and clinical knowledge evolves rapidly and it is vital that we are prepared to review our strategy in the light of changing evidence or recommendations for best-practice in diabetes care. We live in uncertain times and understand that resources are finite, there may be difficult choices to make and all may not be possible within the given timeframe. Commissioners will need support from people living with diabetes and clinicians in decision making if we are to achieve the best that is possible within the available resources. Setting out our goals to support and empower people living with diabetes and striving for consistently high clinical standards in diabetes care gives us direction and aims to proactively improve the health and wellbeing of people living with diabetes, which offers the best approach to achieving optimal clinical outcomes and, thus, best-value in diabetes care.

We call on you to support this strategy and to work together in striving for outstanding care for all people at risk of or living with diabetes in Norfolk and Waveney.

Dr Clare Hambling
Clinical Lead for Diabetes

John Webster
Accountable Officer and Diabetes SRO

Norfolk and Waveney STP
West Norfolk CCG
Executive summary

This strategy sets out a vision, including priorities, for diabetes prevention and care across the Norfolk and Waveney STP area for 2018-2023.

Diabetes is a common and complex multisystem condition that affects people of all ages and backgrounds. Whilst many people with diabetes live well, others face significant challenges or develop serious long-term complications that impact on health and wellbeing and contribute to the difficulties of living with a life-long condition.

The prevalence of diabetes in the Norfolk and Waveney STP area is higher than the average for England, affecting an estimated 7.5-10.5% of the adult population, although up to a third of people who have diabetes may be undiagnosed. The two most common forms of diabetes are type 1 and type 2 diabetes, accounting for approximately 10% and 90% respectively, with small numbers of people living with other forms of diabetes. Norfolk and Waveney has one of the largest populations of children and young people living with type 1 diabetes in England but also has an increasing number of older adults living with type 1 diabetes. The prevalence of type 2 diabetes is also higher in Norfolk and Waveney than seen in other areas of England. Although factors such as poor diet, sedentary lifestyle and obesity are well recognised risk factors for type 2 diabetes, deprivation and inequality, as well as declining mortality, improving life-expectancy, population growth and ageing are also significant risk factors and, together, these contribute to the high prevalence of diabetes locally.

At present, there are no interventions known to prevent or reverse type 1 diabetes and although type 2 diabetes is not always preventable, the prevalence of risk factors and in particular expected population ageing, means it is essential that we support and encourage diabetes prevention. Whilst not all risk factors for type 2 diabetes are modifiable, there is potential for improvement in the overall health and wellbeing of the population. Promoting healthier life-style choices, including physical activity, supporting people to stop smoking and measures to support weight management and healthy ageing, will in turn reduce the incidence of obesity, diabetes, cardiovascular disease, high blood pressure and a number of other medical conditions that impact on general health and wellbeing. This will require a public health approach, working with partnership organisations to reach across the entire STP population, promoting healthy living for people of all ages, as well as developing a portfolio of targeted interventions, including the National Diabetes Prevention Programme, aimed at supporting people identified as being at high risk of developing type 2 diabetes.

For people with established diabetes, there is a need to ensure equity of access to high quality diabetes care and other supporting services, aiming to helping people to live as well as they can. Living with diabetes is associated with many challenges. Commonly, people living with diabetes also have other long-term conditions or face challenging life-factors that impact on general health and wellbeing. Supporting people to live as well as they can with diabetes requires a holistic, person-centred approach, which is strongly advocated.

There is a need to ensure that high quality diabetes care is available and consistent across the STP area for all people living with diabetes. Whilst there are many examples of good or excellent practice in diabetes care, there is evidence of significant variation in care and outcomes for people living with diabetes in Norfolk and Waveney. Currently, the CCG Improvement and Assessment Framework indicates that 4 out of 5 CCG areas require improvement, with 1 rated as inadequate. Although these ratings are likely to be affected by local demographics and coding difficulties, nonetheless, it is clear
that there is marked variation in diabetes care and, similarly, there is evidence of variation in performance indicators for paediatric and inpatient diabetes care. Of particular concern is the variance in outcomes for people with diabetic foot disease, which is likely to be impacted by differences in service provision and the absence of a multidisciplinary footcare team (MDFT) in Great Yarmouth and Waveney.

Although this strategy sets out a long-term and ambitious view, key priorities are:

- **Diabetes prevention**
- **Improving quality and reducing variation in care for all people living with diabetes by:**
  - improving the achievement of care processes
  - improving the achievement of treatment targets
  - improving access to structured education
  - reducing variation in adverse outcomes, with diabetic foot disease highlighted as particular priority

This will be enabled through the growth and development of service models, where key aims are to:

- develop holistic, person-centred care
- develop fully integrated service models, working in partnership across organisations
- improve access to psychological therapies and mental health support
- make best use of the available workforce to support diabetes care
- improve access to diabetes specialist support
- support healthcare professional education in diabetes care
- Develop technological solutions to support care delivery

Other areas highlighted for development include but are not limited to:

- diabetes care for older people, including care homes residents
- inpatient diabetes care
- sharing best practice in paediatric diabetes care and development of transition services
- improving pre-pregnancy preparation
- engaging with and supporting those for whom access to diabetes care is more difficult
- exploring the use of technologies to support diabetes education and care

Much work is already underway to implement this strategy. It is hoped that consistent, high quality service provision will emerge across the STP area to support diabetes prevention and to ensure high quality of care for people living with diabetes.
Section 1  Background and context

1.1 What is Diabetes?

Diabetes is a lifelong condition that causes a person’s blood sugar (glucose) levels to become too high\(^1\). Although high blood glucose levels are considered the main abnormality in diabetes, diabetes is more complex than just abnormal blood glucose metabolism alone and treatment of diabetes needs to consider multiple clinical factors. People who live with diabetes must learn to self-manage their condition for the rest of their life.

Current estimates suggest that there are approximately 4.6 million people in the UK living with diabetes, 3.7 million are diagnosed, with a further 12.3 million people at increased risk of developing diabetes\(^2\).

Diabetes can be broadly classified into 4 groups or types\(^3\):

1. Type 1 diabetes
2. Type 2 diabetes
3. Gestational Diabetes Mellitus (GDM)
4. Specific types due to other causes, such as diabetes due to specific gene defects (Monogenic diabetes or MODY), diabetes due to pancreatic disease and drug-induced diabetes.

The main types of diabetes are:

- **Type 1 diabetes** – where the body’s immune system attacks and destroys the beta cells in the pancreas that produce insulin. Although it can occur at any age, type 1 diabetes is the most common type of diabetes affecting children and young adults. We don’t know what triggers type 1 diabetes but some people may be genetically predisposed and environmental factors, such as viral infections, may play a role\(^4\). Type 1 diabetes is not caused by lifestyle factors and is neither preventable, nor reversible with lifestyle interventions. Type 1 diabetes must be treated with insulin therapy, which is given by injection.

- **Type 2 diabetes** – where the body doesn’t produce enough insulin, or the body’s cells don’t react to insulin (insulin resistance). A number of factors increase an individual’s risk of developing type 2 diabetes, including age (the risk of developing type 2 diabetes gets higher as we get older), genetic factors (ethnicity and family history), being overweight or obese, sedentary lifestyle and low levels of physical activity, as well as high blood pressure\(^5\). Type 2 diabetes can be treated in different ways, including lifestyle interventions, diet and exercise, oral medications and injectable therapies, including insulin.

Type 2 diabetes is far more common than type 1 diabetes. In the UK, around 90% of all adults with diabetes have type 2 diabetes but 95% of children and 10% of adults who live with diabetes have type 1 diabetes\(^6\). Locally, there are approximately 55,000 people diagnosed with Type 2 diabetes.

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\(^1\) NHS net; *Diabetes*; 2018

\(^2\) Diabetes UK; Facts & Figures, cited Sept 2018

\(^3\) American Diabetes Association. Standards of Medical Care in Diabetes, 2018. Diabetes Care 2018; 44:S1

\(^4\) https://www.diapedia.org

\(^5\) Diabetes UK; Diabetes risk factors

\(^6\) NICE; Clinical Knowledge Summaries; Type 1 Diabetes
Gestational diabetes (GDM) - is diabetes that occurs only during pregnancy. Some women have such high levels of blood glucose that their body is unable to produce enough insulin to absorb it all. Gestational diabetes requires highly specialist management during pregnancy but typically resolves as soon as the baby is born. However, women who have had gestational diabetes are at risk of developing type 2 diabetes later in life.

Other specific types of diabetes are much less common, with treatment dependent on the specific cause of diabetes.

Pre-diabetes
Many more people (approximately 100,000 individuals) have blood sugar levels above the normal range, but not high enough to be diagnosed as having diabetes. This is sometimes known as pre-diabetes and places an individual at increased risk of developing full-blown diabetes. Factors that increase your risk for developing pre-diabetes are the same as those for type 2 diabetes (see above).
1.2 Geography

Geographically, the Norfolk and Waveney STP area is one of the largest STP areas in England, covering in excess of 588,000 hectares. The population is estimated at around one million, living in 437,600 households.

The area is largely rural or semi-rural. Norwich is the only major city in the STP area, although there are five larger towns: Lowestoft, Great Yarmouth, King’s Lynn, Thetford and Dereham, each with a population of over 20,000. Rurality and poor public transport infrastructure present additional challenges in NHS service provision across the Norfolk and Waveney STP area.

Diagram 2: Map of Norfolk & Waveney STP area

Health and Social Care Infrastructure

Health and social care services for people living with diabetes in the Norfolk and Waveney STP area are provided by a large number of organisations.

Across the STP area are there 5 different Clinical Commissioning Groups (CCGs) working in 3 units: West Norfolk CCG, Great Yarmouth and Waveney CCG and a Central group (North Norfolk, Norwich and South Norfolk CCGs).

- There are 108 primary care general practices
- 3 acute trusts; the James Paget University Hospital (JPUH) based in Great Yarmouth, the Norfolk and Norwich University Hospital Foundation Trust (NNUHFT) located on the outskirts of Norwich and the Queen Elizabeth Hospital (QEH) in King’s Lynn
- People living in West and South Norfolk may be geographically closer to and may choose to receive acute care services from hospitals outside the STP area, including Addenbrookes Hospital in Cambridge, Papworth Hospital in Papworth Everard, Cambridgeshire and the West Suffolk Hospital in Bury St Edmunds.
- Community services are primarily provided by 2 community trusts; the Norfolk Community Health and Care Trust (NCH&C) and East Coast Community Healthcare (ECCH)
The Norfolk and Suffolk Foundation Trust (NSFT) is the largest provider of Mental Health (MH) services across the STP area.

- Out of Hours (OOH) is provided by IC24 and the ambulance service by the East of England Ambulance Service NHS Trust (EEAST).
- Social care services are provided by Norfolk County Council and Suffolk County Council.
- In addition, there are voluntary sector, domiciliary care and care home providers who are key to supporting healthcare services.

1.3 Social determinants of health

A number of socioeconomic factors contribute to the risk and prevalence of type 2 diabetes.

**Deprivation**

Although the Norfolk and Waveney STP area as a whole is generally considered to be of average or above average affluence, there is significant inequality, with areas of deprivation and it is estimated that as many as 120,000 people living in the STP area are amongst the most deprived 20% of people living in England. These areas of deprivation are mainly located in:

- Norwich
- Great Yarmouth
- King’s Lynn

Deprivation contributes to poor health related outcomes and impacts on life-expectancy. Within the STP area, the difference in life expectancy for those living in the most deprived compared to the most affluent areas varies by as much as 9.7 years for men and 7.9 years for women\(^7\). Deprivation is a significant risk factor for type 2 diabetes.

**Diagram 3: National Audit Data to demonstrate link between deprivation and diabetes\(^8\)**

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\(^7\) Public Health England; Local Authority Health Profiles 2017 data

\(^8\) NHS Digital; National Diabetes Audit 2016-17 short report, interactive report England
Deprivation also leads to higher rates of smoking, poor diet, low physical activity and increased stress, all of which impact on an individual’s ability to manage their health. Furthermore, these risks are likely to impact on children growing up in a low-income households and contribute to the rising prevalence of future diabetes.

**Overweight and Obesity**

Overweight and obesity contribute to the risk of type 2 diabetes. The prevalence of overweight and obesity varies across the STP area but in some areas is estimated to affect 69-70.1% of the adult population, which is higher than the England average, at 61.3%\(^9\).

**Diagram 4: Estimated prevalence of overweight and obesity in adults aged ≥ 18 years, 2016-17\(^{10}\)**

Although the risk of developing type 2 diabetes increases with overweight (Body Mass Index 25-29kg/m\(^2\)), at Body Mass Index (BMI) ≥ 30kg/m\(^2\), the risk increases significantly, with an exponential association between BMI and the relative risk of developing type 2 diabetes\(^{11}\).

**Diagram 5: The relationship between BMI and the risk of developing type 2 diabetes, for a man aged 40-49 years\(^{12}\)**

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\(^9\) Public Health England; Local Authority Health Profiles

\(^{10}\) Public Health England; Local Authority Health Profiles

\(^{11}\) Chan, J.M. et al. Diabetes Care, 1994; 17: 961-969

\(^{12}\) Chan, J.M. et al. Diabetes Care, 1994; 17: 961-969
High levels of poverty have a marked impact on obesity levels, particularly amongst women. According to national statistics on obesity, physical activity and diet, 38% of women in the most deprived areas were obese, compared with 20% of women in the least deprived areas.\(^{13}\)

**Diagram 6: Impact of deprivation on obesity\(^{14}\)**

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**Age**

The number of people living with diabetes continues to rise globally and Norfolk and Waveney are no exception to this. It is estimated that within the Norfolk and Waveney STP area, there are approximately 81,000 people aged 16 years or over, living with diagnosed or undiagnosed diabetes\(^{15}\). The majority of these individuals will have type 2 diabetes.

**Diagram 7: Rates of diabetes diagnosis in each CCG\(^{16}\)**

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\(^{13}\) NHS Digital; Statistics on obesity, physical activity and diet; 2018

\(^{14}\) NHS Digital; Statistics on obesity, physical activity and diet; 2018

\(^{15}\) Public Health England; CVD Profiles – Diabetes; Feb 2018

\(^{16}\) NHS Digital; National Diabetes Audit 2016-17 Short Report, Interactive Report England; audit year 2016-17
<table>
<thead>
<tr>
<th>Percentage of registered population with a diagnosis of diabetes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type 1</strong></td>
</tr>
<tr>
<td><strong>England</strong></td>
</tr>
<tr>
<td><strong>06M: NHS Great Yarmouth and Waveney CCG</strong></td>
</tr>
<tr>
<td><strong>06V: NHS North Norfolk CCG</strong></td>
</tr>
<tr>
<td><strong>06W: NHS Norwich CCG</strong></td>
</tr>
<tr>
<td><strong>06Y: NHS South Norfolk CCG</strong></td>
</tr>
<tr>
<td><strong>07J: NHS West Norfolk CCG</strong></td>
</tr>
</tbody>
</table>

Ageing is now recognised as a significant risk factor for type 2 diabetes. The International Diabetes Federation (IDF) predicts that the greatest rise in diabetes prevalence will be amongst older people, due to more people being diagnosed with diabetes later in life but also more people who were diagnosed at a younger age, living longer with diabetes.  

Diagram 8: Age distribution of population

The higher than national average prevalence of diabetes in 3 of the 5 Norfolk and Waveney CCGs (North Norfolk, West Norfolk and Great Yarmouth and Waveney) is related to the age profile of the local population.

Norfolk is an area popular for retirement and the proportion of the population aged 65 years or over is significantly higher than the national average. The national average population over the age of 65 years in 2016 was 17.9%, in Great Yarmouth the average was much higher at 25.1%, West Norfolk 26.0% and 29.2% in North Norfolk. As can be seen from diagram 9, this divergence from the national average is expected to increase in future years.

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18 ONS; Population projections for clinical commissioning groups and NHS regions; 2016 population figures
19 ONS; Population projections for clinical commissioning groups and NHS regions; 2016 population figures
Of all 210 CCGs in England and Wales, both North Norfolk (11th) and West Norfolk (17th) are in the highest 20 prevalence areas for diabetes.  This will have long-term implications for service provision because, even with efforts to reduce prevalence in middle age and younger older people, the prevalence of people with diabetes will continue to increase as a consequence of ageing.

**Ethnicity**

Although ethnicity is a risk factor for diabetes, there is no large BME community within the STP footprint and ONS data indicates that 96.7% of the population identify themselves as White.

**Diagram 10: Ethnicity of resident population across Norfolk & Waveney**

<table>
<thead>
<tr>
<th>Ethnic Group</th>
<th>Percentage of STP population</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>96.7%</td>
</tr>
<tr>
<td>Mixed/multiple ethnic groups</td>
<td>1.2%</td>
</tr>
<tr>
<td>Asian/Asian British</td>
<td>0.5%</td>
</tr>
<tr>
<td>Black/African/Caribbean/Black British</td>
<td>0.5%</td>
</tr>
<tr>
<td>Other ethnic group</td>
<td>0.2%</td>
</tr>
</tbody>
</table>

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20. ONS; *Population projections for clinical commissioning groups and NHS regions*; 2016 population figures
21. Public Health England; *Diabetes prevalence estimates for local populations*; 2017 data
22. West Norfolk CCG; NDPP Prospectus; Nov 2017
However, it is important that ethnicity is not overlooked as a risk factor for diabetes. Because of the association between ethnicity and type 2 diabetes, people from BME backgrounds should be offered screening and advice regarding non-diabetic hyperglycaemia (NDH) at a relatively younger age and relatively lower (ethnicity-adjusted) BMI, in line with national guidance. Current guidance advises that people of South Asian, Chinese, African-Caribbean, black African or other high risk BME groups, aged 25-39 years, with BMI ≥ 23, should be offered screening for NDH.

For people of BME ancestry living with diabetes, diabetes care should be culturally sensitive and adapted as necessary to support individual needs. For example, where glucose-lowering therapies are prescribed, specialist advice might be required to support individuals wishing to undertake periods of fasting or there may be need for cultural sensitivity and awareness regarding choices of glucose-lowering therapies, in particular, insulin preparations.

**Diagram 11: CCG residents whose first language is not English**

<table>
<thead>
<tr>
<th>Languages Spoken</th>
<th>Great Yarmouth &amp; Waveney</th>
<th>North Norfolk</th>
<th>Norwich</th>
<th>South Norfolk</th>
<th>West Norfolk</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>97.3%</td>
<td>98.8%</td>
<td>94.0%</td>
<td>96.6%</td>
<td>96.2%</td>
</tr>
<tr>
<td>Polish</td>
<td>0.4%</td>
<td>0.3%</td>
<td>0.9%</td>
<td>1.1%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Lithuanian</td>
<td>0.3%</td>
<td>0.1%</td>
<td>0.3%</td>
<td>0.3%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Portuguese</td>
<td>0.7%</td>
<td>0.1%</td>
<td>0.2%</td>
<td>0.1%</td>
<td>0.0%</td>
</tr>
<tr>
<td>East Asian Total</td>
<td>0.3%</td>
<td>0.2%</td>
<td>1.2%</td>
<td>0.2%</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

As the majority of the local population speak English as a first language, there is a risk that services do not proactively facilitate access for individuals with specific cultural or language needs. All service providers should offer a culturally sensitive service with translators/language based literature wherever required. In particular, service information should be made available in Polish, Russian and Portuguese. Translation services should also be available for individuals where these are required. The Norfolk and Waveney CCGs have membership with INTRAN for the provision of local translation services and local service providers will be expected to demonstrate similar arrangements.

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23 NHS England; NHS Diabetes Prevention Programme patient pathway
24 West Norfolk CCG; NDPP Prospectus; Nov 2017
1.4 CCG Improvement and Assessment Framework

The CCG Improvement and Assessment Framework (CCG IAF) provides information to health care organisations, professionals and people living with diabetes about how their local NHS services are performing and is used by national teams to drive organisational improvement through focused support. The RAG ratings across all five local CCGs clearly evidences the need for improvement in diabetes services.

Diagram 12: CCG Improvement and Assessment Framework

<table>
<thead>
<tr>
<th>CCG</th>
<th>NHSE Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Norfolk</td>
<td>Requires improvement</td>
</tr>
<tr>
<td>Great Yarmouth &amp; Waveney</td>
<td>Requires improvement</td>
</tr>
<tr>
<td>South Norfolk</td>
<td>Requires improvement</td>
</tr>
<tr>
<td>North Norfolk</td>
<td>Requires improvement</td>
</tr>
<tr>
<td>Norwich</td>
<td>Inadequate</td>
</tr>
</tbody>
</table>

The CCG IAF is developed based on two metrics;
- The proportion of people with diabetes achieving all of the 3 NICE recommended treatment targets (see section 2.2) for adults and one (HbA1c) for children
- The proportion of people with diabetes diagnosed less than a year ago with a read coded entry confirming attendance at structured education

The Norwich RAG rating may be contributed to by local demographics. According to Public Health England, Norwich is one of the 20% most deprived districts/unitary authorities in England with worse rates of alcohol-related harm hospital stays, self-harm hospital stays and levels of adult smoking when compared against the average for England.

In both West Norfolk and Great Yarmouth and Waveney CCG areas, estimated levels of both adult excess weight and physical activity are worse than the English average, with levels of adult excess weight also being worse than the England average in North Norfolk CCG area.25

CCGs work closely with NHS England, which has a responsibility to assure themselves that CCGs are fit for purpose and improving health outcomes. To assist this function, Diabetes Clinical Networks act as an intermediary between CCGs, providers, voluntary sector and NHS England. Locally, the East of England Diabetes Clinical Network26 has started to implement an annual process of assurance meetings which require detailed input from all lead commissioners. This process enables constructive feedback to be given to the CCGs, allows a meaningful dialogue between the organisations and provides assurance to NHS England. The Network is also responsible for working with all system partners to remove unwarranted variation in outcomes for people with diabetes.

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25 Public Health England; Local Authority Health Profiles
26 More information is available on the role and strategic aims of the Network can be found here
1.5 Future prevalence of diabetes in the Norfolk and Waveney STP area

By 2020, it is predicted there will be 83,687 people aged 16 years or over, living with diagnosed or undiagnosed diabetes, rising to 89,566 by 2025.27

Diagram 13: Local prevalence of diabetes and non-diabetic hyperglycaemia28

<table>
<thead>
<tr>
<th>Number of individuals</th>
<th>West Norfolk CCG</th>
<th>Norwich CCG</th>
<th>North Norfolk CCG</th>
<th>South Norfolk CCG</th>
<th>Great Yarmouth &amp; Waveney CCG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosed with diabetes</td>
<td>12,098</td>
<td>9,067</td>
<td>10,121</td>
<td>11,876</td>
<td>14,955</td>
</tr>
<tr>
<td>Diagnosed with non-diabetic hyperglycaemia (HbA1c 42-47mmol/mol)</td>
<td>18,262</td>
<td>17,656</td>
<td>18,181</td>
<td>24,507</td>
<td>22,471</td>
</tr>
<tr>
<td>Total</td>
<td>30,360</td>
<td>26,723</td>
<td>28,302</td>
<td>36,383</td>
<td>37,426</td>
</tr>
</tbody>
</table>

Diagram 14: Estimated future demand for diabetes services

<table>
<thead>
<tr>
<th>Area</th>
<th>Number of individuals</th>
<th>Percentage prevalence</th>
<th>Number of individuals</th>
<th>Percentage prevalence</th>
<th>Percentage increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>3,116,399</td>
<td>6.7%</td>
<td>4,032,506</td>
<td>8.5%</td>
<td></td>
</tr>
<tr>
<td>East NHSE Region</td>
<td>236,508</td>
<td>6.4%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>NHS West Norfolk CCG</td>
<td>12,098</td>
<td>8.4%</td>
<td>14,616</td>
<td>10.1%</td>
<td>20.8%</td>
</tr>
<tr>
<td>NHS Great Yarmouth &amp; Waveney CCG</td>
<td>15,511</td>
<td>7.5%</td>
<td>19,369</td>
<td>9.8%</td>
<td>24.9%</td>
</tr>
<tr>
<td>NHS North Norfolk CCG</td>
<td>10,785</td>
<td>7.4%</td>
<td>15,306</td>
<td>10.5%</td>
<td>41.9%</td>
</tr>
<tr>
<td>NHS South Norfolk CCG</td>
<td>12,544</td>
<td>6.5%</td>
<td>17,423</td>
<td>8.9%</td>
<td>38.9%</td>
</tr>
<tr>
<td>NHS Norwich CCG</td>
<td>9,573</td>
<td>5.2%</td>
<td>13,740</td>
<td>7.5%</td>
<td>43.5%</td>
</tr>
</tbody>
</table>

27 Public Health England, National Cardiovascular Intelligence Network, Diabetes prevalence model for local authorities and CCGs
28 Public Health England data analysis provided by Professor Mike Sampson, NNUHFT
29 Public Health England Fingertips data: Cardiovascular Disease
1.6 Comorbidity

Comorbidity is the co-existence of other conditions in addition to the primary condition (in this case, diabetes). The presence of 2 or more long-term conditions is often referred to as multimorbidity.

People living with diabetes commonly have other conditions in addition to their diabetes, impacting on overall health and wellbeing. This is particularly true for older people with diabetes, where multimorbidity is almost inevitable, affecting ≥ 95%31. Among middle aged and younger older people with diabetes, there is a strong association between deprivation and multimorbidity with multimorbidity occurring at a relatively younger age32.

In people with diabetes, the most common associated comorbidities are:
- cardiovascular disease (CVD), particularly hypertension (high blood pressure) and coronary heart disease (angina and heart attacks)
- painful conditions, such as neuropathy (nerve damage), joint or soft tissue disease
- depression33

Many of these comorbid conditions are likely to have a greater impact on overall health and wellbeing than diabetes alone.

Diagram 15: Diabetes comorbidity33

In addition to physical and mental health comorbidity, living with diabetes can impact on functional and social wellbeing, contributing to premature ageing and disability. Diabetes is associated with

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31 Salive ME. Epidemiol Rev 2013;35:75–83
increased risk of mobility disability, difficulties with activities of daily living (ADL) and instrumental ADL. Social isolation is also more common amongst people living with diabetes and may increase an individual’s risk of cardiovascular disease or mental health difficulties.

It is important therefore that as well as focusing on the management of diabetes and blood glucose control, clinicians and service providers adopt a person-centred, holistic approach to diabetes care, that attempts to identify all the factors that impact on health and wellbeing, prioritising the management or support for these in order to improve overall health and wellbeing.

Comorbidities can be considered either concordant or discordant, that is, conditions that are directly associated with diabetes (concordant) or those that are unrelated to diabetes (discordant).

Management of concordant comorbidities and associated STP workstreams underway

RightCare - CVD

There are 5 CVD workstreams currently underway across Norfolk and Waveney. These are:

- Prevention and Management of CVD in Primary Care
  - hypertension (high blood pressure)
  - atrial fibrillation (irregular heart beat)
  - high cholesterol and familial hypercholesterolemia
- Referrals – to undertake joint audits between consultants and GPs on cardiology referrals and clinic letters in each of the Acute Trusts
- Elective procedures - identifying outliers and establishing the reasons behind variation in spend
- Reviewing acute care pathways for urgent NSTEMI, pacemaker and vascular pathways
- Heart Failure – linking to the pathway workstreams to review whether care can more appropriately be managed within the community for some patients

The CVD programme is focussed on improving the care for patients suffering from CVD or those at a risk of suffering from CVD in the future. The current focus is on Atrial Fibrillation (AF), as North Norfolk and West Norfolk are amongst the ten CCGs with the highest estimated AF Prevalence.

Heart failure is now one of the most common comorbidities affecting middle aged and older people with diabetes and so it is hoped that people with diabetes may benefit from improving access to diagnostic and clinical management services for heart failure.

34 Activities of daily living are basic self-care tasks that we learn as young children for example, walking, feeding, dressing and grooming. Instrumental activities of daily living are more complex self-care tasks which require thinking skills for example, shopping and meal preparation, managing finances and house cleaning
38 Rutten & Alzaid. Lancet Diabetes Endocrinol; 2017 Published Online June 9, 2017
Discordant comorbidities and STP workstreams underway
Mental Health

Emotional or psychological problems are experienced by at least four in ten people with diabetes at any one time, yet less than a quarter of people with diabetes have access to appropriate emotional and psychological support. This reduces their ability and motivation to self-manage, leading to poorer health outcomes, reduced quality of life and an estimated 50% increase in healthcare costs.

The psychological and emotional wellbeing of people with diabetes must therefore be an integral part of diabetes care delivery and should not be limited to people with ‘diagnosable/classifiable’ psychological problems.

*Diabetes UK Position Statement on emotional and psychological support for people with diabetes, July 2016*

People with diabetes experience disproportionately high rates of mental health problems such as depression, anxiety and eating disorders. All people with diabetes should have access to psychological treatment and support to reduce psychological distress and improve self-management. Diabetes, in contrast to cardiovascular disease and lung disease, is a long term condition that has a significant impact on young people, particularly in the transition through adolescence to adulthood.

A number of factors associated with living with a long term condition, and specifically diabetes, affect psychological wellbeing:
- Acceptance of the diagnosis
- Adjustment to lifestyle and self-care
- Living with symptoms and progression of diabetes
- Prospect of complications

The consequences of psychological morbidity in diabetes are significant. Impaired psychological wellbeing is associated with poorer self-management, suboptimal glycaemic control and an increased risk of diabetic complications.

In addition to the impact on quality of life, several population studies have shown a 1.5-fold increased risk of mortality in people with comorbid diabetes and depression compared with diabetes alone.

The *Five Year Forward View for Mental Health* (2016) required CCGs across Norfolk & Waveney to increase access to psychological therapies by over 9,000 patients per annum by 2020/21. STP-wide expansion of psychological therapies will focus on increased integration to improve service user experiences and outcomes. Psychological provision will comply with all IAPT standards, including the key national access and recovery targets.

Diabetes strategy implementation will be cognisant and responsive to this opportunity to support the psychological wellbeing of people living across Norfolk and Waveney who experience diabetes. In order to achieve this, services will need to work in an integrated way to support delivery.
RightCare - Respiratory

The Respiratory programme is focused on reducing unwarranted variation in clinical practice, access to care, utilisation of services, outcomes and quality of care for those with or at risk of Asthma and Chronic Obstructive Pulmonary Disease (COPD). COPD is one of the most commonly associated discordant comorbidities in people with diabetes, after CVD, painful conditions and depression\textsuperscript{34}.

Approximately 80\% of patients with COPD have one or more other long term conditions such as hypertension, coronary heart disease, depression and anxiety. Some of the most common risk factors for these conditions, such as smoking, are independent risk factors for both COPD and diabetes. Because of this, the programme has had a focus on disease prevention services including smoking cessation, increasing referrals to and completion of pulmonary rehabilitation, and increasing appropriate referrals to the Wellbeing Service (IAPT).
2.1 Care Processes

Adults
In the 2017-18 GMS contract for England, 87 of 559 points in the Quality and Outcomes Framework (QOF) related to diabetes care processes. QOF has been used to support improvements in care for diabetes and has resulted in demonstrable improvements however, in some CCGs, practices are achieving full QOF payments despite consistent underachievement in a number of the diabetes performance indicators.

The number of care processes each person can expect to receive annually has recently increased from 8 to 9. These care processes are:

Diagram 16: The 9 annual Care Processes

Diabetes UK however, recommends the achievement of 15 care processes as a gold standard and have developed materials to help people with diabetes understand what they should expect of their care. The CCGs should support the promotion of this gold standard through promotion of patient activation materials.

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41 NHS Employers; primary care contracts
42 Diabetes UK; How Good Is Diabetes Care in England and Wales? A summary of findings from the National Diabetes Audit: Care Processes and Treatment Targets report 2015–16
43 Diabetes UK; 15 Healthcare essentials
In order to improve attainment of care process and treatment targets, all 5 CCGs have received NHS England Treatment and Care funds to support specialist review and primary care support in the management of people with diabetes who are considered to be at the highest risk of developing complications. There has been initial positive feedback and there will be an aim to retain specialist support to primary care in the new service model(s).

Diagram 18: Care processes national performance indicators

<table>
<thead>
<tr>
<th>Target</th>
<th>England</th>
<th>East of England</th>
<th>West Norfolk CCG</th>
<th>Norwich CCG</th>
<th>North Norfolk CCG</th>
<th>South Norfolk CCG</th>
<th>GYWCCG</th>
</tr>
</thead>
<tbody>
<tr>
<td>People with T1 who achieved all 8 care processes</td>
<td>34.4%</td>
<td>35.8%</td>
<td>23.4%</td>
<td>51%</td>
<td>50.9%</td>
<td>47.9%</td>
<td>28.9%</td>
</tr>
<tr>
<td>People with T2 who achieved all 8 care processes</td>
<td>47.7%</td>
<td>44.4%</td>
<td>45.2%</td>
<td>44.1%</td>
<td>50%</td>
<td>54.1%</td>
<td>40.1%</td>
</tr>
</tbody>
</table>

2.2 Treatment Targets

Diabetes provision is audited quarterly through the National Diabetes Audit (NDA). The overall results from the NDA show that there are improvements to be made across the STP area, with a
need to improve achievement of the recommended treatment targets, ensuring that people living with diabetes receive the 9 Care Processes and, in particular, foot surveillance.

Evidence from landmark research studies in diabetes care, confirm that active management of the major risk factors, glycaemic (blood sugar) control, blood pressure and cholesterol, along with management of lifestyle factors such as diet, physical activity and smoking cessation, reduce the risk of long-term diabetes related complications.\textsuperscript{46,47,48}

Recent data from the NDA demonstrates that there is room for improving the achievement of all 3 treatment targets across the STP area.

**Diagram 19: Treatment targets national performance indicators**\textsuperscript{49}

<table>
<thead>
<tr>
<th>Target</th>
<th>England</th>
<th>East of England</th>
<th>West Norfolk CCG</th>
<th>Norwich CCG</th>
<th>North Norfolk CCG</th>
<th>South Norfolk CCG</th>
<th>GYWCCG</th>
</tr>
</thead>
<tbody>
<tr>
<td>People with T1 who achieved all 3 targets</td>
<td>19.0%</td>
<td>19.1</td>
<td>14.8%</td>
<td>16.7%</td>
<td>18%</td>
<td>16.3%</td>
<td>13.3%</td>
</tr>
<tr>
<td>People with T2 who achieved all 3 targets</td>
<td>41.1%</td>
<td>40.2</td>
<td>41.7%</td>
<td>36.5%</td>
<td>39.6%</td>
<td>39.1%</td>
<td>36.9%</td>
</tr>
</tbody>
</table>

The ratings are based on the percentage of people with a coded diagnosis of diabetes who are achieving \textit{all 3} treatment targets recommended by the National Institute for Health and Care Excellence (NICE) (HbA1c < 59mmol/mol (7.5%), Cholesterol < 5mmol/l and BP <140/80mmHg).

There are a number of factors which influence achievement of the 3 treatment targets. Young adults with diabetes, for example, may struggle to engage with care recommendations especially those with additional problems, such as socioeconomic difficulties, depression, difficulty with drug or alcohol use, any of which makes living with diabetes even more challenging. This is more relevant in areas with high levels of deprivation. Amongst older people with complex multimorbidity, frailty or those approaching the end of life, intensive treatment towards achieving the 3 treatment targets may not be in the best interest of person-centred care and, here, setting different treatment parameters may be entirely appropriate. Whilst we recognise these important contributory factors, there remains scope for improvement and we must aim to increase achievement of care and treatment processes for people with diabetes.

It is envisaged that the Treatment and Care Transformation projects will be a start towards improving these metrics and that new or developing models of care will place greater emphasis on outcome measures, including the achievement of care processes and treatment targets as these are fundamental to minimising the risk of long-term adverse clinical outcomes for people living with diabetes.

\textsuperscript{47} David M Nathan for the DCCT/EDIC Research Group; Diabetes Care 2014 Jan; 37(1): 9-16
\textsuperscript{49} Public Health England; Diabetes fingertips data 2016/17
\textsuperscript{50} WNCCG RAG amber because the difference between the area value and the average is deemed to be statistically not significant since the lower CI limit for West Norfolk is less than England
2.3 Structured Education

As part of the Treatment and Care Programme, all 5 CCGs received funding to implement or improve the provision of structured education for people living with diabetes. The structure of courses varies between CCGs. As yet, roll out is incomplete and in several areas there is still no access to structured education, which is an unacceptable position.

At present, in areas where education is available, it is only available by attendance at a course. There is provision of structured education within all CCG areas for people with type 2 diabetes, although uptake remains suboptimal and efforts are being made to improve engagement and promote the importance of structured education as an element of routine diabetes care. For people who are unwilling or unable to attend a classroom based session, technology is not yet being fully utilised to improve completion rates and this is an area suitable for exploration in the future.

Once an individual has attended structured education, this needs to be recorded by the GP practice onto the patient record. This has never been incentivised and so, local data suggests that there is a significant discrepancy between the numbers of individuals attending structured education and those correctly coded as **have attended**.

**Diagram 20: Structured education national performance indicators**

<table>
<thead>
<tr>
<th>Target</th>
<th>England</th>
<th>East of England</th>
<th>West Norfolk CCG</th>
<th>Norwich CCG</th>
<th>North Norfolk CCG</th>
<th>South Norfolk CCG</th>
<th>GWCCG</th>
</tr>
</thead>
<tbody>
<tr>
<td>% offered structured education (with type 1) within 12 months of diagnosis</td>
<td>41.3%</td>
<td>37.9%</td>
<td>33.3%</td>
<td>40.0%</td>
<td>66.7%</td>
<td>20.0%</td>
<td>28.6%</td>
</tr>
<tr>
<td>% attended structured education (with type 1) within 12 months of diagnosis</td>
<td>3.3%</td>
<td>9.7%</td>
<td>0%</td>
<td>0%</td>
<td>33.3%</td>
<td>0%</td>
<td>14.3%</td>
</tr>
<tr>
<td>% offered structured education (with type 2) within 12 months of diagnosis</td>
<td>77.3%</td>
<td>73.4</td>
<td>81.5%</td>
<td>82.5%</td>
<td>79.6%</td>
<td>72.7%</td>
<td>77.4%</td>
</tr>
<tr>
<td>% attended structured education (with type 2) within 12 months of diagnosis</td>
<td>7.4%</td>
<td>11.9%</td>
<td>5.2%</td>
<td>0.7%</td>
<td>2.0%</td>
<td>0.7%</td>
<td>17.1%</td>
</tr>
</tbody>
</table>

In West Norfolk and the three Central CCGs, there is provision for type 1 structured education. The DAFNE (Dose Adjustment For Normal Eating) course commissioned by the Central CCGs is QISMET accredited and the locally adapted KLIF (King’s Lynn Insulin For Food) course provided in West Norfolk is currently going through the QISMET accreditation process. Structured education for

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51 Public Health England; Diabetes fingertips data 2016/17
52 The attended structured education figures do not correlate with data from education providers because coding for having completed structured education is not a QOF indicator therefore, this has led to significant underreporting.
53 As above
54 QISMET is a not-for-profit organisation which develops Quality Standards defining good practice and certificating providers against these Standards
people with type 1 diabetes is not currently available to people in the Great Yarmouth and Waveney CCG area and this has been identified as an area of inequity that the CCG has already made plans to address.

Although local initiatives are underway to improve the attainment of the 3 treatment targets (see section 2.1), which will go some way to impacting the RAG status of the CCGs, much more ambitious developmental work is needed. Given the metrics used to generate the RAG rating, it is anticipated that even with implementation of local initiatives, it will take time for improvements in treatment target attainment and recording of attendance at structured education to translate into improvements in the RAG rating because of the necessary time lag between intensifying treatments and subsequent measures of biometric parameters.

### 2.4 Paediatric Diabetes Audit

Across NNUHFT, QEH and JPUH, there were 584 individuals whose care was reported through the National Paediatric Diabetes Audit55.

The majority of children and young people attending at the NNUHFT were between the ages of 10-14 years whereas, at both QEH and JPUH, the young people were slightly older at 15-19 years. This may indicate there are differences in the average age of diagnosis across the STP footprint which may require further investigation by commissioners.

Diagram 21: Age of children and young people included in the Paediatric Diabetes Audit

55 National Paediatric Diabetes Audit, 2016-17 data
Care processes
The National Paediatric Diabetes Audit measures care for children against 7 annual care processes\textsuperscript{34}. The care processes for children are different to those for adults;

1. Glycated Haemoglobin A1c (HbA1c) (blood test for diabetes control)
2. Body Mass Index (BMI) (measure of cardiovascular risk)
3. Blood pressure (measure of cardiovascular risk)
4. Urinary albumin (urine test for kidney function)
5. Thyroid screen (blood test for hyper/hypothyroidism)
6. Eye screening (photographic test for eye risk)
7. Foot examination (foot examination for ulcer risk)

Data from the National Paediatric Diabetes Audit benchmarks local providers against the National average. In 2016/17, QEH (59.5%) successfully achieved above the national average (43.5%) for ensuring children and young people received the 7 care processes. At NNUHFT, 30.9% of children and young people received all 7 care processes and 28.1% at JPUH.

Diagram 22: Performance of local providers against national average for delivery of 7 care processes for children and young people\textsuperscript{56}

The national average rate for completion of all 7 care processes has increased in the latest audit from 35.5% in 2015-16 to 43.5% in 2016-17. The only provider locally to have achieved this is the QEH. There may be an opportunity for learning between the acute Trusts which could improve performance and ensure all children and young people are receiving the same high standards of care. In particular, there appears to be significant variation in achievement of care processes for thyroid, albuminuria and foot examinations. The chart below details achievement of annual care processes across the three acute sites in comparison to the national average.

\textsuperscript{56} National Paediatric Diabetes Audit, 2016-17 data
Structured education
All three of the acute providers are above the national average for ensuring children and young people access structured education.

Diagram 24: Percentage of children receiving structured education from local acute providers

57 National Paediatric Diabetes Audit, 2016-17 data
2.5 Diabetic footcare audit

Diabetic Foot disease is one of the most significant and serious adverse outcomes that can affect an individual living with diabetes. Prevention and, where a problem does arise, early intervention are fundamental elements in minimising the risk of adverse outcomes, including lower extremity amputation. Ensuring that people living with diabetes receive an annual foot check, with the opportunity for education in foot self-care is one of the essential core care processes. The management of active diabetic foot disease is complex, with good evidence that outcomes can be improved by the provision of a multidisciplinary footcare team (MDFT), usually centred around acute trusts, where there is access to specialist services such as radiology, microbiology, orthopaedic and vascular surgery.

Currently, across the STP area, there is almost a 3-fold variation in major lower extremity amputation rates (see further below). Addressing this variance in such a serious outcome is highlighted as an area of major concern and considered a priority.

A key focus of this strategy is to ensure NICE guidance regarding the care of people with diabetes and diabetic foot disease is met. NICE states that all commissioners should ensure the following are in place:\n
- A foot protection service for preventing diabetic foot problems, and for treating and managing diabetic foot problems in the community.
- A multidisciplinary footcare service for managing diabetic foot problems in hospital and in the community that cannot be managed by the foot protection service. This may also be known as an interdisciplinary footcare service.
- Robust protocols and clear local pathways for the continued and integrated care of people across all settings, including emergency care and general practice. The protocols should set out the relationship between the foot protection service and the multidisciplinary footcare service.
- Regular reviews of treatment and patient outcomes, in line with the National Diabetes Footcare Audit.

Diagram 25: Diabetic footcare national performance indicators

<table>
<thead>
<tr>
<th>Target</th>
<th>England</th>
<th>East of England</th>
<th>West Norfolk CCG</th>
<th>Norwich CCG</th>
<th>North Norfolk CCG</th>
<th>South Norfolk CCG</th>
<th>GYWCCG</th>
</tr>
</thead>
<tbody>
<tr>
<td>People with T1 who received an annual foot check</td>
<td>70.1%</td>
<td>67.2%</td>
<td>60.1%</td>
<td>75.1%</td>
<td>72.1%</td>
<td>72.7%</td>
<td>68.9%</td>
</tr>
<tr>
<td>People with T2 who received an annual foot check</td>
<td>79.4%</td>
<td>70.5%</td>
<td>70.7%</td>
<td>66.5%</td>
<td>66.7%</td>
<td>73.8%</td>
<td>74.1%</td>
</tr>
</tbody>
</table>

Data from Public Health England (PHE) also indicates that there is significant variance in the proportion of people with diabetes who have received an annual foot check. All 5 of the Norfolk and Waveney CCGs perform below the benchmarked standard, which is set nationally at 80%. As well as

58 NICE Guideline 19; Diabetic foot problems: prevention and management; August 2015
59 Public Health England; Diabetes fingertips data 2016/17
an examination to facilitate foot risk stratification and the potential to identify previously unrecognised foot problems, the annual foot check provides an opportunity for healthcare professionals to offer advice and education in footcare.

The National Diabetes Footcare Audit highlights two areas of persistent delays;
- late presentation
- delays in referral from primary care into footcare services

This implies need for greater education in diabetes footcare for both people living with diabetes and healthcare professionals. There is significant variance across the 5 Norfolk CCGs in healthcare professional education and referral rates and this is an area that has been highlighted for intervention.

Recently, a bid was successfully submitted to Health Education England for Workforce Transformation Funding. This will support the following projects in relation to diabetic footcare:

1. **Education for health care professionals** – this will identify eleven health care professionals from providers of diabetic footcare services in Norfolk and Waveney to complete the College of Podiatry accredited course;

2. **Education for non-registered foot health providers** – this will establish local diabetic foot clinical interest groups for non-registered footcare practitioners to provide education on the assessment, treatment and referral pathways for diabetic foot complications. This presents an opportunity for improved clinical networking, communication and collaboration between NHS providers and non-registered private footcare providers;

3. **Diabetic footcare package for care homes** – this project will work jointly with care homes to develop a daily foot assessment tool.

A key aim is to develop a programme of education to ensure that all people with diabetes are offered an annual foot check undertaken by a healthcare professional who has completed appropriate training. Facilitating education for others involved in day to day footcare, offers an opportunity to identify new foot problems at an early stage, with the potential for earlier diagnosis and referral.

**Diabetic foot complications**

Across the STP there is variation in the outcomes for people presenting with diabetic foot complications. This is shown in the Diabetic Footcare Profiles published in 2018, which provide data from the three-year period 2014-15 through to 2016-17.\(^{60}\)

Diabetic foot complications are the end stage of a process that begins at diagnosis often 15-20 years previously, and it is important to consider all the decisions taken and care received along this pathway will contribute to outcomes. With increased life expectancy, diabetes screening and earlier detection of diabetes it is likely that amputation previously not attributed to diabetes will now be included in these figures.

The reasons behind the variation in amputation rates, admissions and length of stay are multifactorial with many common themes across the STP. The clinical leads for the specialist

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\(^{60}\) These figures need to be interpreted with caution as they are based on small numbers with large confidence intervals.
diabetic foot services have identified several areas to be addressed in order to improve the outcomes of people with diabetic foot disease:

1. Address the lack of a Multi-Disciplinary Footcare Team (MDFT) at the JPUH
2. People with diabetes waiting too long between presentation to a health professional (usually primary care or community nursing) before referral to outpatient diabetic foot clinics, leading to more complicated presentations. Outcomes are worse if the time to first expert assessment is greater than 14 days. Delayed referral to a specialist Diabetic Foot Clinic is associated with:
   a. More severe ulcers.
   b. Poorer healing rates.
   c. More hospital admissions, revascularisations (surgery to improve blood flow), and amputations.
3. Longer waits for outpatient (OP) and inpatient (IP) vascular review in the non-arterial centres at the QEH and JPUH. Pressures at the NNUHFT as the main arterial centre for the STP.
4. Long waits for OP and IP interventional radiology (specialist x-rays)
5. The lack of an STP wide Out Patient Antibiotic Therapy (OPAT) service.
6. The lack of surgical cross cover and theatre time for minor surgical procedures at the QEH.
7. Increasingly complex antibiotic regimes needed to treat infection, and increased complications in frail elderly people
8. A general lack of awareness of both HCPs and patients on the seriousness of foot complications
9. The provision of community podiatry to provide preventative care as per NICE NG19 has not kept pace over the years with the diabetic population
10. Gaps in provision of acute footcare – e.g. for nursing / residential homes and individuals who are housebound.
11. The banding of community nurses managing diabetic foot complications in the community may mean that community nurses have less knowledge and skill and can miss early signs of deterioration.
12. Difficulty to recruit to vacant posts meaning services are not fully staffed and thus have restricted capacity or people require a considerable time in training before they have the necessary knowledge and skills to work in a specialist foot clinic.

Major Amputation Rates

Diagram 26: Diabetic amputations by CCG

<table>
<thead>
<tr>
<th>Target</th>
<th>England</th>
<th>East of England</th>
<th>West Norfolk CCG</th>
<th>Norwich CCG</th>
<th>North Norfolk CCG</th>
<th>South Norfolk CCG</th>
<th>GYWCCG</th>
</tr>
</thead>
</table>

Public Health England; Diabetes fingertips data 2016/17
Nationally, Norwich CCG and Great Yarmouth and Waveney CCG have some of the highest rates for major diabetic amputation across the East of England, with only Southend having a higher amputation rate, although the rate for Norwich CCG is not statically different when benchmarked against the England rate. These figures do not take into account the variation in mortality rates for people with diabetic foot disease across the STP.

The NNUHFT and the QEH both have Multi-Disciplinary Footcare Teams (MDFTs) as defined in NICE NG19. The NNUHFT has one of the largest MDFTs in the country, with in excess of 6,500 patient contacts a year. The NNUHFT is the main arterial hub for the STP area and as such is subject to different pressures when compared to those of the non-arterial centres at QEH and JPUH. Services outside the STP area also contribute to service provision however, this can lead to difficulties for people accessing care.

Commissioners will need to review whether provision is adequate to meet needs of people attending at or admitted to the QEH or JPUH, as there are concerns that current arrangements are resulting in care being undertaken out of area, which has implications for patient’s access and means co-ordinating care is more challenging, which risks contributing to adverse outcomes.

In the case of Great Yarmouth and Waveney, JPUH, it is felt that the higher rate of amputation is in part related to the lack of a MDFT.

Across the STP 40-55% of referrals are taking longer than 14 days to be referred to specialist MDFT. In order to determine the cause of the late referrals the lead podiatrists covering NNUHFT and QEH have agreed to undertake an audit of cases exceeding a 14-day interval (as recorded on the NDFA entry) between first presentation to a health care professional and assessment by a specialist footcare team. In the case of people attending at the QEH, these are seen by the community team who run the clinic within the hospital. Due to the community team having access to SystmOne they have been able to review shared patient records themselves. However, the team in NNUHFT do not have this access. They are working with Norwich CCG to send letters to Primary Care to complete this audit.

The findings from the QEH audit have shown that whilst the referrals into the service from healthcare professionals are mostly being made in a timely manner, people with a diabetes-related foot problem sometimes delay seeking help either due to a lack of understanding of the severity and consequences of their foot issue, or through a perception of not wanting to bother NHS professionals.

It has also shown that when referrals are received and appointments scheduled for affected individuals to be seen in specialist clinics, transport difficulties sometimes contribute to people being unable to attend appointments, which then require rescheduling, contribute to delays in treatment and care. The treatment of diabetic foot disease can require weekly appointments for a number of weeks/months, which can make it difficult for affected individuals to attend appointments. This is exacerbated by the rurality of the county and poor public transport infrastructure.
Minor diabetic lower-limb amputations

Diagram 27: Diabetic amputations by CCG

<table>
<thead>
<tr>
<th>Target</th>
<th>England</th>
<th>East of England</th>
<th>West Norfolk CCG</th>
<th>Norwich CCG</th>
<th>North Norfolk CCG</th>
<th>South Norfolk CCG</th>
<th>GYWCCG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor diabetic lower-limb amputation processes</td>
<td>21.2%</td>
<td>-</td>
<td>17.5%</td>
<td>19.1%</td>
<td>15.8%</td>
<td>13.0%</td>
<td>18.6%</td>
</tr>
</tbody>
</table>

Across Norfolk and Waveney all CCGs are below the national average for minor diabetic lower-limb amputations however, this may be linked to a higher rate of major amputations. Minor amputations, though often reported and perceived as a poor outcome, in fact can be a definitive treatment for diabetic foot disease and prevent ongoing infection and major surgery.

Variance in the commissioning of surgical services for diabetes-related foot problems has resulted in different pathways of care across the STP area. As a consequence, it is possible this contributes to delays in minor surgical intervention, resulting in prolonged medical management and this is an area that warrants further exploration.

Hospital spells for diabetic foot disease

Diagram 28: Length of stay for diabetic amputations by CCG

<table>
<thead>
<tr>
<th>Target</th>
<th>England</th>
<th>East of England</th>
<th>West Norfolk CCG</th>
<th>Norwich CCG</th>
<th>North Norfolk CCG</th>
<th>South Norfolk CCG</th>
<th>GYWCCG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital spells for diabetes foot disease</td>
<td>145.5</td>
<td>-</td>
<td>180.2</td>
<td>150.9</td>
<td>144.7</td>
<td>127.4</td>
<td>240.1</td>
</tr>
<tr>
<td>Median length of hospital stay for diabetic foot disease</td>
<td>8.0</td>
<td>-</td>
<td>7.0</td>
<td>9.0</td>
<td>10.0</td>
<td>10.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Adjusted length of hospital stay for diabetic foot disease</td>
<td>9.2</td>
<td>-</td>
<td>8.4</td>
<td>10.5</td>
<td>10.2</td>
<td>10.9</td>
<td>7.4</td>
</tr>
</tbody>
</table>

It is thought the lack of consultant/medical footcare clinics at the QEH and JPUH contributes to higher rates of hospital stays for diabetic foot disease. Where these clinics have not been specifically commissioned, they run depending on consultant availability, capacity is often limited, and access for people requiring urgent care is hard to access. This results in affected individuals requiring hospital admission (predominantly the management of infections) that may have been prevented with timely MDFT review and outpatient treatment. Some individuals require multiple hospital admissions. Again, the lack of a commissioned MDFT foot pathway, including surgical time, means that affected individuals may be admitted several times whilst waiting for vascular or orthopaedic procedures.

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62 Public Health England; Diabetes fingertips data 2016/17
63 Public Health England; Diabetes fingertips data 2014/15 - 16/17
Across the STP, waiting times for interventional radiology are also a major factor contributing to the number of people being admitted and their length of stay (LOS).

Local audit conducted in the QEH and NNUHFT suggests that up to 60% of people admitted to hospital with a diabetic foot complication have not previously been seen in a diabetic foot clinic and are not known to podiatric teams. These people have longer length of stays and more surgical procedures than those previously under the care of the diabetic foot clinic, demonstrating that outpatient management is effective.

JPUH does not currently have access to a community intra-venous (IV) therapy team, which means that everyone requiring IV antibiotic therapy needs to attend an Ambulatory Emergency Care (AEC) ward to receive treatment, which might contribute to the higher number of hospital spells.

**Adjusted length of stay**

Patients from North, South and Norwich CCG areas predominantly use the NNUHFT. It is thought that the length of stay for these groups may be impacted by the fact that NNUHFT have more specialised orthopaedic and vascular services available within the trust. QEH and JPUH are likely to discharge patients if access to a specialist assessment is not available for a number of days, whereas NNUHFT are likely to have specialist care available within a short period of time and therefore patients remain in hospital whilst all MDFT care is completed.

Whilst West Norfolk and some Central Norfolk CCGs have community IV teams, capacity may limit availability and prevent teams accepting referrals. Of the people who attend for diabetic foot disease care at the QEH, approximately 70% are resident in Norfolk, 20% in Cambridgeshire and 10% in Lincolnshire. This may require a proportion of these people to attend for hospital for IV therapy or might result in delayed discharge. It might be possible for these people to be seen in a short-term ward with a zero length of stay.

As with the hospital spells, Great Yarmouth and Waveney’s length of stay is likely to be skewed due to a lack of provision of community IV teams. Patients who attend AEC for their IV therapy will be recorded as a zero length of stay.

### 2.6 Diabetes in Pregnancy Audit

Pre-gestational diabetes increases adverse pregnancy outcomes for women and babies, including congenital malformation, miscarriage, preterm delivery, pre-eclampsia, macrosomia, and perinatal mortality.[64]

The National Pregnancy in Diabetes (NPID) audit measures the quality of antenatal care and pregnancy outcomes for women with pre-gestational diabetes[65] (i.e. women who are known to have diabetes prior to falling pregnant). The NPID measures performance against the updated NICE guidance *Diabetes in pregnancy: management from preconception to the postnatal period*. The specific recommendations providers are measured against are[66]:

**Prior to pregnancy**

[64] NHS Digital; National Pregnancy in Diabetes Report 2016; October 2017
[65] NHS Digital; National Pregnancy in Diabetes Report 2016; October 2017
[66] NHS Digital; National Pregnancy in Diabetes Report 2016; October 2017
• Use of folic acid supplement
• Keeping HbA1c below 48 mmol/mol where achievable without causing problematic hypoglycaemia
• Stopping / substituting of oral glucose-lowering medications apart from metformin
• Suspending statins and ACE inhibitors/ARBs

**During pregnancy**
• Early first contact with joint diabetes and antenatal clinic
• Monitoring HbA1c to assess level of risk to pregnancy
• More frequent retinal screening

**Birth and neonatal care**
• Elective birth and timing of birth
• Transfer of infants to intensive, high dependency or special care only if there are clear clinical indications

As can be seen from the graph below, there is considerable variation in performance between local providers. Work will be undertaken to ensure high-quality service provision is available to all women with diabetes who are pregnant or planning to become pregnant and that examples of high quality care are implemented across organisations. Higher first trimester HbA1c was related to congenital anomaly rates and, in women with Type 1 diabetes, to stillbirth and neonatal death67.

**Diagram 29: Proportion of women well prepared for pregnancy by reducing HbA1c to <48mmol/mol and those managing their HbA1c during pregnancy**68

Maternal HbA1c levels at or above 48 mmol/mol after 24 weeks were associated with preterm69 delivery, large for gestational age babies, and neonatal unit admission

In order to help ensure services are delivering care in line with best practice, NICE has developed a quality standard containing 7 quality statements46. It is expected that a service able to demonstrate achievement of the quality statements will be providing a high standard of care.

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67 NHS Digital; National Pregnancy in Diabetes Report 2016; October 2017
68 NHS Digital; National Pregnancy in Diabetes Report 2016; October 2017
69 Preterm delivery is a birth that occurs before the 37th week of pregnancy
According to the latest Diabetes in Pregnancy Report, the number of pregnancies recorded at the three local acute providers is shown in the table below.

### Diagram 30: Number of recorded births and proportion of babies admitted to neonatal care

<table>
<thead>
<tr>
<th>Region / Provider Name</th>
<th>Number of pregnancy records</th>
<th>Percentage of babies admitted to neonatal unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>East of England</td>
<td>1101</td>
<td>27%</td>
</tr>
<tr>
<td>James Paget University Hospital</td>
<td>46</td>
<td>&lt;25%</td>
</tr>
<tr>
<td>Norfolk and Norwich University Hospital</td>
<td>121</td>
<td>38%</td>
</tr>
<tr>
<td>The Queen Elizabeth Hospital</td>
<td>23</td>
<td>&lt;25%</td>
</tr>
</tbody>
</table>

The proportion of full term babies admitted to a neonatal unit varied greatly between services. The range was from two-thirds of babies born to mothers with Type 1 diabetes down to none, and from 43% of babies born to mothers with Type 2 diabetes to none. Further review of processes may be required locally to ensure infants remain with their mother where possible and are only transferred to intensive, high dependency or special care units if there is a clear clinical indication to do so.

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70 NHS Digital; National Pregnancy in Diabetes Report 2016; October 2017
71 NHS Digital; National Pregnancy in Diabetes Report 2016; October 2017
2.7 National Diabetes Inpatient Audit (NADIA)

Of the people with diabetes admitted to hospital in 2017, 92% were there due to a cause other than diabetes itself, however, inpatient care for people with diabetes accounts for 11% of the entire NHS budget\textsuperscript{72}.

Diagram 31: Diabetes inpatient admissions by type of diabetes\textsuperscript{73}

Currently, one in six hospital beds are occupied by someone with diabetes and it is predicted to rise to one in four by 2030\textsuperscript{74}.

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\textsuperscript{72} Diabetes UK; Making hospitals safe for people with diabetes; 2018
\textsuperscript{73} NHS Digital; NADIA data 2017
\textsuperscript{74} Diabetes UK; Making hospitals safe for people with diabetes; 2018
All providers should ensure there are processes in place to identify inpatients with diabetes to allow the diabetes inpatient team to review their care, with those at most risk having access to specialist support. Across the acute trusts within the STP area, NADIA data suggests significant variance in achieving this recommendation:

**Diagram 32: Percentage of admissions of individuals with diabetes who were visited by the diabetes team**

<table>
<thead>
<tr>
<th>Site</th>
<th>Percentage number of visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>34.7%</td>
</tr>
<tr>
<td>James Paget University Hospital</td>
<td>15.5%</td>
</tr>
<tr>
<td>Norfolk and Norwich University Hospital</td>
<td>26.6%</td>
</tr>
<tr>
<td>Queen Elizabeth Hospital, The (King's Lynn)</td>
<td>49.3%</td>
</tr>
</tbody>
</table>

Diabetes UK recommends<sup>75</sup> that all hospitals ensure there is a fully staffed diabetes inpatient team made up of:
- Diabetes Consultant(s)
- Sufficient diabetes inpatient specialist nurses to run a daily and weekend service
- Access to a diabetes specialist podiatrist, pharmacist, dietician and access to psychological support
- A projects and implementation team leader and admin support

NICE supports this with a quality standard, recommending that adults with type 1 diabetes in hospital receive advice from a multidisciplinary team with expertise in diabetes<sup>76</sup>

Data from NADIA suggests that staffing levels for diabetes specialist nurses are in line with or better than the average for England. However, NADIA data indicates that there is variance in consultant staff.
support for inpatient care and a lack of specialist dietician or pharmacist support across all 3 acute trusts and, at the JPUH, there is also a lack of inpatient podiatry support\textsuperscript{77}. Whilst it is possible the data gathering process under represents the true situation, NADIA data indicates variance in the availability of specialist dietician and pharmacist to inpatient teams.

\textsuperscript{77} NHS Digital; NADIA data 2017
Diagram 33: Average weekly specialist hours spent providing inpatient care by provider

NADIA data also highlights variance in a number of other metrics, including the proportion of people with diabetes visited by a member of the specialis diabetes teams during their admission and the use of insulin infusions. Importantly, NADIA highlights significant variance in reported rates of medication errors in diabetes care, insulin errors and rates of hypoglycaemia. At the JPUH, medication errors were reported at 3.5%, whereas at the NNUHFT, this was 32.7%. The rate of reported hypoglycaemia ranged from 11.4% at the JPUH to 25.9% at the NNUHFT, although the rate of severe hypoglycaemia was highest at the QEH, being reported at 10.1%.

At present, it is not known what factors contribute to variance in these reported metrics but it is possible that factors such as diabetes control prior to hospital admission and demographic factors may contribute. However, there may be an opportunity to share practice where one acute trust performs relatively better than another. Staff training is another area that would be worthy of further exploration.

NADIA also asks people with diabetes how they feel inpatient services might be improved. The main areas highlighted for improvement by people living with diabetes included better staff knowledge of diabetes at the JPUH and QEH and more suitable meals at the NNUHFT.

DUK advocate that the ownership of diabetes by the individual is supported whilst admitted to hospital. Consistency in skill provision is also considered important. Commissioners should refer to the Diabetes UK, Making Hospitals Safe for People with Diabetes document.

Other Diabetes Complications
In addition to diabetes foot disease (see section 2.5), people living with diabetes are at risk of developing a number of complications, with factors such as age, duration of diabetes, and control of cardiometabolic risk factors contributing to risk. Common complications include but are not limited

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78 NHS Digital; NADIA data 2017
79 Diabetes UK; Making hospitals safe for people with diabetes; 2018
to; diabetic eye disease, renal disease and cardiovascular disease. Such complications will need specialist management and care. Commissioners should ensure such services are effectively managed through local care pathways.

### 2.8 Five Year Forward View for Mental Health (FYFVMH)

Physical and mental health are closely linked – people with severe and prolonged mental illness are at risk of dying on average 15 to 20 years earlier than other people – one of the greatest health inequalities in England. Two thirds of these deaths are from avoidable physical illnesses, including heart disease and cancer, often contributed to by smoking and other lifestyle factors. There is also a lack of access to physical healthcare for people with mental health problems\(^{80}\).

In addition, people with long term physical illnesses suffer more complications if they also develop mental health problems, increasing the cost of care by an average of 45 per cent. Yet much of the time this goes unaddressed. There is significant evidence that dedicated mental health provision as part of an integrated service can substantially reduce these poor outcomes. For example, in the case of Type 2 diabetes, £1.8 billion additional cost can be attributed to poor mental health. Yet fewer than 15 per cent of people with diabetes have access to psychological support. Pilot schemes show providing such support improves health and cuts costs by 25 per cent\(^{81}\).

Diagram 34: The impact of increased physical health spend due to failure to address mental health needs\(^{82}\)

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\(^{80}\) NHS England; *Five Year Forward View for Mental Health*; February 2016

\(^{81}\) NHS England; *Five Year Forward View for Mental Health*; February 2016

\(^{82}\) NHS England; *Five Year Forward View for Mental Health*; February 2016
Section 3 Vulnerable Groups

3.1 Children and young people (see also section 2.4)

NICE Quality Standard for Diabetes in Children and Young People

1. Children and young people presenting in primary care with suspected diabetes are referred to and seen by a multidisciplinary paediatric diabetes team on the same day.
2. Children and young people with type 1 or type 2 diabetes are offered a programme of diabetes education from diagnosis that is updated at least annually.
3. Children and young people with type 1 diabetes are offered intensive insulin therapy and level 3 carbohydrate-counting education at diagnosis.
4. Children and young people with type 1 diabetes who have frequent severe hypoglycaemia are offered ongoing real-time continuous glucose monitoring with alarms.
5. Children and young people with type 1 diabetes are offered blood ketone testing strips and a blood ketone meter.
6. Children and young people with type 1 or type 2 diabetes are offered access to mental health professionals with an understanding of diabetes.

The National Paediatric Diabetes Audit has indicated that all local providers are performing above the national average for the percentage of children with type 1 diabetes who are referred for further psychological support.
JPUH has one of the highest referral rates in the country and so, there may be an opportunity to share this good practice between providers.

Diagram 35: Percentage of children with Type 1 diabetes who accessed additional psychological support services

![Diagram showing percentage of children with Type 1 diabetes accessing additional psychological support services.]

Young people with cystic fibrosis are an important vulnerable childhood and transitional population and should have access to specialist clinics and support to help them live well with their diabetes. There is a dedicated Cystic Fibrosis Diabetes clinic at NNUHFT but commissioners in other localities may need to investigate whether this is sufficient to meet needs across the STP footprint.

**Transition care in diabetes**

Every young person with diabetes should have a proper transition of care. To support effective transition planning within care services, NICE has developed a quality standard which all services should aim to achieve.

Transition should be a clear process over a defined period and not just “one off transfer of care” from children to adult services therefore, planning for the transition process needs to start at a much earlier age. It is expected that the transition process should start around 12-14 years of age depending on the needs of the young person.

### NICE Transition from Children’s to Adults’ Services Quality Standard (QS140)

1. Young people who move from children’s to adults’ services start planning their transition with health and social care practitioners by school year 9 (aged 13 to 14 years), or immediately if they enter children’s services after school year 9.
2. Young people who move from children’s to adults’ services have an annual meeting to review transition planning.
3. Young people who are moving from children’s to adults’ services have a named worker to coordinate care and support before, during and after transfer.
4. Young people who will move from children’s to adults’ services meet a practitioner from each adults’ service they will move to before they transfer.
5. Young people who have moved from children’s to adults’ services but do not attend their first meeting or appointment are contacted by adults’ services and given further opportunities to engage.
NICE recommends that young people should be involved in the co-production of transition policies and supporting tools. Services should aim to be developmentally appropriate and person-centred, respecting the young person as an individual and involving them in their care planning.\(^{83}\)

Southampton Children’s Hospital have developed the Ready, Steady, Go toolkit\(^{84}\) to ensure all elements of the transition process have been addressed.

Future service developments should ensure there is a team identified to manage the transition process. This team should include; Consultants, Specialist Nurses (as key workers), Dietitians Psychologists and the Transition Co-ordinator from the young person’s diabetes team and the adult service they are moving into. Continuity of care should be supported by allowing continued appointments with the same healthcare practitioners. Access to mental health services may also be required to support young people living with diabetes.

Technological solutions should also be identified to empower self-management skills, communicating with healthcare professionals and allow data sharing. In particular, technology should be used to support;

- Blood glucose monitoring
- Virtual clinics such as skype
- Text massages, emails
- Access of single database by patients, specialist and GPs

Where there are individuals who are recurrently being admitted to hospital with diabetic ketoacidosis\(^{85}\) (DKA) or missing appointments, services should have processes to identify these individuals and should offer intensive interventions. Commissioners will need to review local practice and seek assurance these processes are in place. Commissioners may also explore opportunities to employ Transition Co-ordinators with responsibility for ensuring:
  - Supporting young people with recurrent DKA or recurrently missing appointments
  - Facilitating peer support

Supported transition care has been demonstrated to improve outcomes and reduce unplanned admission rates for DKA in young people with type 1 diabetes.\(^{86}\)

Locally, strategies for young people who leave (or are coming into the area) for studying at universities or working away will need to be developed.

**Children and young people with diabetes other than type 1 diabetes**

Although the vast majority of children and young people living with diabetes have type 1 diabetes, there are likely to be small numbers of children living with diabetes due to other causes, including type 2 diabetes, genetic forms of diabetes, medication-induced diabetes and children with cystic fibrosis or other forms of pancreatic disease leading to diabetes. It is important that these young people also have access to specialist clinics and support to help them live well with their diabetes.

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\(^{83}\) NICE clinical guideline 43; Transition from children’s to adult’s services for young people using health or social care services; 24\(^{th}\) Feb 2016

\(^{84}\) Southampton Children’s Hospital; Ready, Steady, Go toolkit

\(^{85}\) DKA is a serious problem where the body starts to run out of insulin and can be life-threatening if not treated quickly

3.2 Frail elderly people, including those resident in care homes

Diabetes in later life is associated with a myriad of factors increasing the risk of adverse clinical outcomes and the complexity of clinical management. Ageing is a major risk factor for type 2 diabetes, which is by far the commonest type of diabetes in older people, although many people with type 1 diabetes now enjoy a good life expectancy and live into older age. Within the Norfolk and Waveney STP area, data from PHE suggests that 54.7 - 65.8% of people with type 2 diabetes and 13.9 - 20.9% of people with type 1 diabetes are now aged ≥ 65 years, prevalence rates which are amongst the highest in England\textsuperscript{87}. It is recognised that the treatment targets recommended within the Treatment and Care Programme are not always appropriate for older people.

Although many older people with diabetes live well and independently, diabetes is associated with premature ageing, which can affect health and wellbeing across physical health, mental health, functional and social wellbeing. Earlier onset of frailty, the geriatric syndromes, functional disability, cognitive decline or dementia, and depression or social isolation may contribute to poor health-related outcomes. Most older people with diabetes live with multimorbidity (multiple medical conditions) and are prescribed multiple medications (polypharmacy), which in themselves can cause problems due to drug-drug interactions or drug-disease interactions and glucose lowering medications used in the treatment of diabetes remain amongst the medications most commonly associated with emergency hospital admissions due to adverse medication reactions in older people\textsuperscript{88}. Recognising the challenges facing older people offers an opportunity for earlier intervention and support, aimed at improving wellbeing and quality of life.

Care home residents with diabetes are particularly vulnerable, characterised by highly comorbid health state, frailty and cognitive dysfunction, high rates of hospital admission for hypoglycaemia (low blood sugar) and infection. This poses a great challenge for effective diabetes management, warranting a holistic comprehensive geriatric approach that considers all elements impacting on health and wellbeing, functional status, life-expectancy and the wishes of the individual, their family and/or carers. Adopting a person-centred approach, individualising management plans, determining priorities for care and agreeing realistic goals based on holistic assessment is important in supporting diabetes management that reduces the risk of adverse outcomes due to poor diabetes control but avoids unnecessary overtreatment and the risks associated with hypoglycaemia and other treatment side-effects.

Diagram 36: Older people living with diabetes are likely to benefit from a comprehensive geriatric approach, considering physical and mental health, functional and social status.

\textsuperscript{87} Public Health England; CVD Profiles – Diabetes; Feb 2018
Developing and implementing local guidance for primary care practitioners, based on recommendations from national and international expert groups, will support individualised care for older people with diabetes. Already, care pathways across the STP area are focusing on in-reach diabetes support to care homes and care home residents, as well as housebound older people, to ensure they receive personalised diabetes care. It is anticipated that changes in QOF for 2019/20 will support less stringent treatment targets for older people with moderate or severe frailty, aimed at guarding against unnecessary overtreatment across glycaemic, blood pressure and cholesterol parameters. It is important, however, that healthy older people with good life expectancy are supported to receive all the necessary treatment and care to ensure wellbeing and to minimise the risk of long-term diabetes-related complications. For all older people, a person-centred, holistic approach to care is advocated and glycaemic goals should be agreed with the individual and/or their family and/or carers, following a comprehensive assessment that considers the geriatric domains, functional and social status, as well as personal wishes and life-expectancy.

Avoiding overtreatment and hypoglycaemia in older people
Older people are at greater risk of severe hypoglycaemia (very low blood sugars), which risks serious injury and harm. In the East of England, 43.8% of emergency ambulance call-outs for severe hypoglycaemia are to people aged > 70 years[^89] and data for unplanned hospital admissions for severe hypoglycaemia in England confirm that older people are most commonly affected[^90].


Although hypoglycaemia is not always avoidable, there is evidence that older people are commonly over treated on diabetes medications\(^91\) and that overtreatment contributes to the risk of severe hypoglycaemia\(^92\). Thus it is important that older people receive individualised care that balances the need to treat diabetes to avoid long-term diabetes-related complications against the risk of harm from adverse medication effects. Setting individualised glycaemic goals and choosing the most appropriate medications is crucial in reducing the risk of hypoglycaemia.

Although NICE advises individualised care, it offers no guidance on determining individualised glycaemic goals, although a number of international guideline groups now qualify glycaemic goals for older people, based on functional assessment.

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\(^{91}\) Hambling et al. Diabet Med. 2017;34:1219–27

\(^{92}\) Boussageon et al. BMJ 2011;343:d4169
Diagram 38: An algorithm for determining individualised glycaemic goals for older people with diabetes requiring glucose-lowering therapies.

<table>
<thead>
<tr>
<th>Functional Status</th>
<th>Glycaemic Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy or Relatively Healthy</td>
<td>HbA1c 53–59 mmol/mol (6.5–7.5%)</td>
</tr>
<tr>
<td>Fit and Functionally Independent</td>
<td></td>
</tr>
<tr>
<td>Relatively longer anticipated life expectancy</td>
<td></td>
</tr>
<tr>
<td>Managed on diet alone or oral glucose lowering</td>
<td></td>
</tr>
<tr>
<td>therapies associated with low risk of hypoglycaemia</td>
<td></td>
</tr>
<tr>
<td>Complex/Intermediate health or social care needs with</td>
<td>HbA1c 55–64 mmol/mol (7.0–8.0%)</td>
</tr>
<tr>
<td>intermediate life-expectancy or mild-moderate frailty</td>
<td></td>
</tr>
<tr>
<td>and requiring oral glucose lowering therapies</td>
<td></td>
</tr>
<tr>
<td>Or, fit older people requiring SU or insulin therapy</td>
<td></td>
</tr>
<tr>
<td>Very Complex/Poor Health/Frail</td>
<td>HbA1c 59–69 mmol/mol (7.5–8.5%)</td>
</tr>
<tr>
<td>Or, older people with complex/ intermediate health or</td>
<td></td>
</tr>
<tr>
<td>social care needs and/or mild frailty requiring insulin</td>
<td></td>
</tr>
<tr>
<td>therapy</td>
<td></td>
</tr>
<tr>
<td>End of Life Palliative Care</td>
<td>Avoid symptomatic hyper/hypoglycaemia</td>
</tr>
</tbody>
</table>

* HbA1c < 13 mmol/mol may be considered acceptable in some fit older people on monotherapy associated with low risk of hypoglycaemia, although reviewing the ongoing need for medication should be considered.

Assuming that new QOF treatment targets for older people with moderate or severe frailty will be advised, it is likely there will be a need to support primary and community care clinicians with guidance on de-intensifying or de-prescribing glucose-lowering therapies, yet this is an area with limited evidence base. However, there is some local experience, which could be adopted across the STP area and work is currently underway to develop such guidance. Where possible, therapies associated with risk of hypoglycaemia (low blood sugars) should be avoided and, where insulin therapy is considered necessary, simplifying the insulin regimen should be considered.

Therapeutic decision making and prescribing in older people with diabetes and clinical complexity is an area that would benefit from the support of clinical pharmacists and medicines management teams, particularly with regard to de-prescribing and reducing unnecessary drug treatment in older people. Some work with clinical pharmacists has already been undertaken in some of the CCG areas and it is hoped this model of care could be developed more widely throughout the STP area.

A policy to support care homes in their care of older people with diabetes is also being developed, which will include recommendations for care, education and staff training. As referred to above, a diabetes footcare package for care homes will be developed following the successful HEE Workforce Transformation bid.

3.3 People at risk of cognitive impairment or dementia

Research shows that people who have type 2 diabetes are more likely to develop cognitive impairment or dementia, compared to people without diabetes. Cognitive impairment complicates

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93 Hambling et al, 2018 (Submitted)
diabetes self-management\textsuperscript{87} and increases the risk of hypoglycaemia (low blood sugars)\textsuperscript{95}. Many older people with diabetes will develop mild cognitive impairment and will not progress to develop dementia. However, both Alzheimer’s disease and vascular dementia are more common in older people with type 2 diabetes\textsuperscript{86}. Longer duration and greater severity of diabetes may increase the risk of dementia, again highlighting the importance of good diabetes care from diagnosis. Currently, there is no evidence that strict blood sugar control in diabetes care reduces the risk of developing dementia\textsuperscript{97}, whereas there is evidence that hypoglycaemia contributes to the risk of dementia in older people with diabetes and, at the same time, that older people with diabetes and dementia are at greater risk of severe hypoglycaemia\textsuperscript{98}.

The number of patients with both type 2 diabetes and dementia is rising, which poses new challenges in diabetes care and medication administration, particularly where blood glucose monitoring or insulin therapy is required.

Across Norfolk and Waveney STP, it is estimated that 16,197 people aged 65 and over have dementia. As at August 2018, 10,170 had a recorded dementia diagnosis on their GP practice register. In addition, there are currently 272 patients aged below 65 with a diagnosis of early onset dementia.

As for older people with diabetes and frailty, older people with diabetes and dementia are likely to benefit from an assessment that adopts a person-centred, holistic care approach following a comprehensive geriatric framework to determine priorities for care and agree glycaemic goals. Where possible, therapies associated with risk of hypoglycaemia should be avoided and, where insulin therapy is considered necessary, simplifying the insulin regimen should be considered.

A locality guideline for the management of diabetes in older people is being developed and is aimed at supporting clinicians in their management of older people with clinical complexity (see above).

### 3.4 People with learning disabilities\textsuperscript{99}

People living with learning disabilities suffer significant health inequalities. Men with a learning disability die, on average, 14 years before those without a learning disability and, for women, the difference is even greater, at 18 years. Adults with a learning disability have much higher levels of multimorbidity than the general population, with health problems starting at an earlier age; this includes diabetes\textsuperscript{87}. Prevalence of diabetes in people with a learning disability is unknown, but recent data indicates it is around 10\% - nearly double the rate of the general population. In most cases this is Type 2 diabetes. Obesity and a sedentary lifestyle are known risk factors for Type 2 diabetes. In the UK around 40\% of adults with a learning disability are obese. Around 25\% of adults with a learning disability report walking for no more than 10 minutes at a time in the past month compared with 10\% of the general population. Over-prescribing of psychotropic medication to people with a learning disability adds to the obesity problem\textsuperscript{100}.

\textsuperscript{85} Punthakee et al. Diabetes Care [Internet]. 2012 Apr [cited 2015 Jan 4];35(4):787–93
\textsuperscript{86} Biessels et al. Lancet Diabetes Endocrinol; 2014;2(3):246–55
\textsuperscript{87} Tuligenga RH. Endocr Connect; 2015;4(2):R16-24
\textsuperscript{88} Mattishent & Yoke. Diabetes Obes. Metab 2015;33:3-8.
\textsuperscript{99} Diabetes UK has a range of resources to support improvements care for people with learning disabilities
\textsuperscript{100} Diabetes UK; improving care for people with diabetes and a learning disability
People with a learning disability may have reduced ability to understand new or complex information and to learn new skills. This is combined with a reduced ability to cope independently. Even so, most people with a learning disability can be involved in the management of their diabetes and research shows they want more help to do so.

People with learning disabilities need to be able to access the same care as other people and, where appropriate, they should have access to information in a format that supports their understanding or access to technologies to support their care.

Reasonable adjustments should be made to support people with learning disabilities who are diagnosed with or at risk of developing diabetes and care should be tailored to ensure it is appropriate to the individual’s age and stage in life. People with learning disabilities may need additional support in order to achieve the 9 care processes and 3 treatment targets so, services should facilitate these requirements.

Links should be made with the physical health checks programme for people with learning disabilities, promoting and supporting collaborative and coordinated care which is accessibly delivered and individualised to the needs of the individual. Diabetes UK offers a range of tools and online resources to help primary care practitioners support the care of people living with diabetes and learning disability. However, this may not be widely known. There may be a need to increase awareness of the association between diabetes and learning disability and to disseminate information aimed at improving the care and health of people with learning disability.

3.5 People with physical disability, including sensory impairment

As described above, adults living with diabetes are at greater risk of physical disability, with earlier onset of mobility difficulties, difficulties with Activities of Daily Living (ADLs) and instrumental ADL. Sensory impairment is also more common in people living with diabetes. Diabetes remains an important cause of visual impairment in the United Kingdom and hearing impairment also more commonly affects people with diabetes. Disability may impact on ability to access healthcare. Where possible, these factors should be taken into consideration when organising services. Additional support may be required to assist people with physical or sensory disability. For people with visual impairment, supporting materials should be available in large print or Braille. The care of people living with disability might also appropriately be supported with use of technologies.

3.6 People with severe mental illness

People living with severe mental illness (SMI), such as schizophrenia or bipolar disorder are at increased risk of developing type 2 diabetes, which is contributed to by a number of factors, including poverty, higher rates of overweight and obesity and lower levels of physical activity. People with SMI are also more likely to smoke or drink alcohol, which contributes further to poor health and health-related outcomes. In addition, a number of medications used in treatment are known to significantly increase the risk of type 2 diabetes or may be associated with significant weight gain.

101 Diabetes UK; Improving care for people with diabetes and a learning disability
103 RNIB; Key information and statistics on sight loss in the UK
raised blood pressure or cholesterol, contributing to metabolic syndrome and increasing the risk of type 2 diabetes and CVD. Severe mental illness is associated with reduced life expectancy (15–20 years), with CVD being a major cause. Young adults may be at particular risk. Metabolic screening may be warranted from a relatively younger age. CVD risk calculators may underestimate risk and so should be interpreted with caution. People living with severe mental illness (SMI) include those living with schizophrenia, bipolar disorder or psychoses. People with SMI face stark health inequalities and are less likely to have their physical health needs met, both in terms of identification of physical health concerns and delivery of the appropriate, timely screening and treatment. Compared to the general population, individuals with SMI face a shorter life expectancy by an average of 15–20 years and, among other increased risks, are at double the risk of obesity and diabetes and three times the risk of hypertension and metabolic syndrome. Many of the medications recommended for treatment of SMI contribute to metabolic syndrome and type 2 diabetes.

Diagram 39: Impact of medication for SMI on weight

The Lester Positive Cardiometabolic Health Resource – is a simple framework for identifying and treating cardiovascular and type 2 diabetes risks in patients with psychosis receiving antipsychotic medication.

The Cardiometabolic Health Resource supports the recommendations relating to monitoring physical health in the NICE guidelines on psychosis and schizophrenia in adults (www.nice.org.uk/guidance/cg178) and young people (www.nice.org.uk/guidance/cg155). In addition it also supports the statement about assessing physical health in the NICE quality standard for psychosis and schizophrenia in adults (www.nice.org.uk/guidance/qs80).

105 Royal College of Psychiatrists; Diabetes UK Factfile on severe mental illness
106 Royal College of Psychiatrists; Diabetes UK Factfile on severe mental illness
The needs of this group of people, and particularly young people, should be considered in the development of pathways and programmes of care, and the consideration should be made as to specialist knowledge and skills required to meet their needs. Links should be made with Norfolk & Suffolk Foundation Trust and the Norfolk & Waveney STP developing physical health programme for people with SMI, promoting and supporting collaborative and coordinated care which is accessibly delivered for this cohort. Consideration should be given to the development of a MDT approach to support the management of people with SMI and diabetes who are struggling with self-care and at risk of serious adverse outcomes, whether due to complications arising from diabetes or from their SMI.

3.7. Hard to reach communities

Looked after children (LAC)
Looked after children have their health needs met through an annual health assessment, ongoing contact between their social worker and foster carer and LAC reviews at 1mth, 3mth and 6mth. Anecdotal advice suggests there are no specific concerns regarding the ability of LAC to access local diabetes care services.

Prison Population
All people with diabetes should have access to high quality care. People with diabetes in prisons can face additional difficulties in managing their condition due to lack of specialist healthcare professional input, care planning and case management, and self-monitoring facilities. Dietary choices and access to facilities for physical activity may also be restricted, increasing the risk for
sedentary lifestyle and obesity. Diabetes UK have identified resources which will help local commissioners ensure provision is effective whilst an individual is in prison and after release\textsuperscript{107}.

**Homelessness\textsuperscript{108}**

Homelessness in the UK is increasing and people experiencing homelessness face significant health inequality, including reduced life-expectancy. People who are homeless are significantly more likely to be unemployed, have poor mental health, have problems with drug or alcohol abuse, and are more likely to live with a long-term condition. Comorbidity amongst the longer-term homeless population is not unusual: 41\% of homeless people report living with a long-term physical health problem, including diabetes and 45\% report having a diagnosed mental health problem. Life-expectancy is significantly reduced, the average age of death of a homeless person is 47 for a man and 43 years for a woman.

**Diagram 41: The Impact of Homelessness on the Individual**

![Diagram showing the impact of homelessness on the individual](image)

Source: homeless.org.uk

The relationship between homelessness, physical and mental health, individual and socioeconomic circumstances is complex. For people who are homeless, accessing healthcare is likely to be difficult and the individual’s healthcare needs are likely to be broad ranging, requiring more support than with diabetes alone. Providing healthcare to homeless people is likely to require facilitation, support and partnership working between healthcare, social services and voluntary sector organisations.

**Traveller Communities**

Gypsy, Roma and Traveller communities are thought to experience poorer health, with higher prevalence of long-term conditions and poorer healthcare experience, compared to the general

\textsuperscript{107} Diabetes UK; Diabetes Care in Prisons
\textsuperscript{108} Public Health England; Evidence review: Adults with complex needs (with a particular focus on street begging and street sleeping); Jan 2018
population\textsuperscript{109}. Prevalence of type 2 diabetes amongst Gypsy, Roma and Traveller communities is not known and is likely to vary by ethnicity but has been reported to affect as many as 17\textendash{}20\% of the adult population. Sedentary lifestyle, poor diet and higher rates of obesity are thought to contribute. Depression and anxiety are also more commonly reported and thought to be contributed to by stress and social isolation. Healthcare services for Gypsy and Traveller communities need to be culturally sensitive. Previous poor experience accessing healthcare, difficult interactions with health and social care providers and lower levels of functional literacy all contribute to making access to healthcare even more difficult\textsuperscript{101}. Local authority services in Norfolk are working to co-ordinate improved services for people from Gypsy, Roma and Traveller communities\textsuperscript{110} through the Norfolk and Suffolk Gypsy Roma and Traveller forum. Working with the Travellers’ Liaison Service to support access to healthcare, healthy lifestyle advice, diabetes prevention services and diabetes care for those with established diabetes is essential to improve health and diabetes-related outcomes.

3.8 People with Eating Disorders

People with diabetes are at higher risk of complications if they also live with an eating disorder and people with eating disorders are at increased risk of developing physical complications, including diabetes.\textsuperscript{111}

This is a highly complex clinical area, requiring specialist support. For people with an eating disorder and diabetes, the eating disorder and diabetes specialist teams should collaborate on the assessment, monitoring and treatment of the co-morbid conditions, with clear pathways of care and recognition & management of risk.

\textsuperscript{109} Greenfields M; It’s a sweet life travelling: Meeting the healthcare needs of Travellers with diabetes; Journal of Diabetes Nursing 18: 193–8

\textsuperscript{110} Norfolk County Council; Gypsies, Roma and Travellers

\textsuperscript{111} NICE Clinical Guidance NG69 https://www.nice.org.uk/guidance/ng69/evidence/appendix-k-flow-charts-pdf-4478188001 May 2017
Section 4 The future vision
4.1 STP diabetes vision statement

We aspire to.....

- Develop and promote high quality person-centred care which focuses on individual needs
- Eradicate variation by promoting best practice in diabetes care and strive to achieve all NICE quality standards
- Promote equity of access to care for all people living with diabetes regardless of their personal circumstances or background
- Help people to live as well as they are able

4.2 Overarching goals for diabetes services

Helping people to live as well as they can with diabetes necessitates a multi-agency approach. All CCGs will be expected to implement hub and spoke arrangements for diabetes care although, due to the infrastructure available in each CCG, the local models may vary between localities. All services will however, be expected to work towards overarching goals and there will be elements of provision common to all services.
The Programme Board will have a role to play in ensuring consistency of provision but underpinning this will need to be:

- Improved engagement with the Diabetes Clinical Network/ NHSE
- Regular meetings between commissioning leads
- Regular communications to all key partners especially as we move through periods of service redesign
- Improved engagement with people living with diabetes, standardised across the footprint
4.3 Key elements for new service models

The clinical engagement event held on 11th September at The Space, Norwich offered an opportunity to engage with a number of service models and a number of common themes emerged that were considered important elements in the development of fully integrated person-centred diabetes services.

Living with diabetes

Holistic, Person-centred Care
People living with diabetes encounter many challenges and stressors in everyday life affecting general health and wellbeing and impacting on diabetes self-management. For many, this may mean that attending diabetes clinic appointments, or diabetes biometrics, may not be seen as the most important elements for overall wellbeing.
The Year of Care\textsuperscript{112} service model, highlighted the value of holistic, person-centred care in supporting people living with long-term conditions and was felt to offer opportunities likely to improve the care of people living with diabetes, particularly in the context of multimorbidity.

Adopting a person-centred approach provides care that is respectful of and responsive to individual preferences, needs and values. Clinicians are encouraged to work with the individual to make shared decisions, which allows the individual to have a direct say in their diabetes care. Helping individuals understand what care they should expect and encouraging preparation for their clinical review, offers an opportunity to make best use of contact time with a healthcare professional and this approach is likely to facilitate self-efficacy.

A holistic care assessment considers all elements impacting on health and wellbeing together, identifying the individual’s concerns and allows healthcare professionals to prioritise these and offer support or intervention. At any age, prioritising management of clinically dominant conditions or offering professional support with challenging life-factors, whether or not related to diabetes, may confer greater benefit for overall wellbeing and quality of life than glycaemic management alone.

Involving the person with diabetes (or other long-term condition) and helping them understand their condition and their test results is a fundamental part of supporting people in living well with their diabetes.

Although different service models may emerge across the STP area, it is recommended that all models of care should aim to adopt a patient-centred, holistic approach, involving the person living with diabetes in their diabetes management, identifying and prioritising individual concerns with a view to supporting the individual in living as well as they can.

\textsuperscript{112} Year of Care Partnerships
Diagram 42: Future service structure

All services will aim to support:
- **Patient centred** care, flexible to meet individual needs
- Patient activation
- Dietary, lifestyle and exercise advice
- Social prescribing
- Integrated IT and digital technologies
- Peer support
- Development of universal care plan
- Integrated finance
- Multi agency working

<table>
<thead>
<tr>
<th>PREVENTION</th>
<th>INTEGRATED CARE SERVICE</th>
<th>SECONDARY CARE</th>
</tr>
</thead>
</table>
| • NHS Diabetes Prevention Programme (NDPP) | • Accredited education for:  
  - people living with diabetes  
  - carers  
  - healthcare professionals  
| • Other programmes to support people at risk of or identified with pre-diabetes | • Access to mental health services  
| • Pharmacy initiatives | • Retinal screening  
| • Population health promotion:  
  • Physical activity  
  • Dietary and weight management services  
  • Smoking/ alcohol services  
  • Active aging | • In-reach for hard to engage or vulnerable groups  
  • Initiation and management of injectable therapies  
  • Supporting seamless referrals to/ from secondary care Pharmacy initiatives including improving uptake of NMR/ MURs  
| | • Dental screening  
| | • Social prescribing (see appendix 7)  
| | • Preconception care |

Some services will sit between the integrated and secondary care teams but the aim will be to integrate in the long-term:
- Severe MH
- Some diabetes footcare
- Early identification of people at risk of hypoglycaemia

**Responsibilities**
- Increasing individual and community capacity for self-care

**Responsibilities**
- Early multi-factorial, intensive interventions
- Delivery of holistic, individualised patient care
- Ensuring right care, right time, right place
- Improving achievement of care processes/treatment targets

**Responsibilities**
- Impact the inpatient length of stay with faster and safe discharge from hospital and  
| Increased use of day case/ outpatient services, where clinically appropriate |
Section 5  Enablers
5.1 NHS Diabetes Prevention Programme (NDPP)

NHS England has commissioned NDPP capacity locally. The central Norfolk CCGs rolled out the NDPP service in Wave 1 and the demand was overwhelming. Now in Wave 3, West Norfolk CCG and Great Yarmouth & Waveney CCGs are mobilising the NDPP and the central Norfolk CCGs have been allocated additional capacity to help address their waiting list.

Whilst NDPP is an element of service provision for people at risk of developing diabetes, there is insufficient capacity to meet the level of demand. All STP partners will need to work collaboratively in order to develop a range of services which can be offered to people identified as pre-diabetic.

5.2 NHS RightCare

Norfolk and Waveney is undertaking the RightCare programme of improvement, tackling variation across care pathways. Footcare has already been highlighted as an area for targeted improvement, providing education for people living with diabetes and Health Care Professionals, to address delays in presentation and variance in outcomes across the STP area.

Diagram 43: RightCare Diabetes Pathway

In addition, the CCGs have proposed to impact prescribing quality as the RightCare plan for 18/19 onwards. All 5 CCGs are outliers for drug spend. Previous QIPP initiatives to address this variation by utilising cheaper alternatives have proven unsuccessful. The RightCare approach will incorporate a full pathway review, with a long-term vision aimed at supporting individuals to remain as healthy as
possible, supporting self-management of their diabetes without the requirement for medication until clinically indicated. Reviewing pathways for support with weight management and other lifestyle factors is considered important in this regard. Where medication is required, prescribing should be individualised and take account of all clinical features that determine likely benefits and risks from different medication groups. In particular, factors such as established CVD, weight, risk of hypoglycaemia and cost-effectiveness should be considered when making prescribing decisions.

5.3 NHS England Transformation Funding

NHS England approved an STP bid for transformation funding to improve
- Achievement of 3 NICE Treatment Targets
- Uptake of Structured Education

These projects are underway with quarterly reporting to NHS England through West Norfolk CCG as lead commissioner.

Structured education provision is best practice for all patients with diabetes therefore, the CCG commissioners will work to ensure accredited provision is available across the region for all people diagnosed with Type 1 and Type 2 diabetes. In addition, the CCGs will ensure appropriate education packages for children and young people and women of childbearing age are also routinely available.

Moving forward, to improve uptake of structured education, particularly amongst children and young people, people of working age or those with access difficulties, digital options for structured education will be further investigated. To ensure service is flexible to meet the needs of people with diabetes, it will be necessary to develop a variety of options for service provision.

Treatment target projects vary between CCGs. In Great Yarmouth and Waveney, Eclipse is being utilised at a population level to identify where individuals are missing a single care process and these patients are being targeted.

In the central Norfolk CCGs (South Norfolk CCG, North Norfolk CCG and Norwich CCG), a new model of direct Consultant outreach support from NNUHFT to general practice has been developed. This has consisted of a project manager and data management to promote effective recording, reporting and risk stratification within primary care systems, as well as supporting education. A local incentive scheme is currently being negotiated to ensure that GP practices are supported to focus on the improvement changes required. This model aims to support long standing intermediate services, with nurse specialists supporting mentorship for practice nurses and GPs.

In West Norfolk, there are 3 elements enhancing the achievement of treatment targets and care processes. Consultant outreach is provided by a diabetes specialist providing 2 sessions per week, working in primary care. Clinical criteria have been established for those patents who would benefit most from Consultant review of their care. The Consultant is responsible for holistic review and care planning, as well as education and support for primary care professionals. In some cases, the consultant is able to arrange face-to-face reviews, seeing people with diabetes in their own GP practice. A DSN-led outreach service is also provided for individuals at intermediate clinical risk. This service also includes virtual review of patient care and care planning, with review of all clinical risk factors and supporting practice nurses in their care of people with diabetes. The third element of the transformation project is a DSN-led outreach service to people with diabetes who are resident in a
care home or housebound and for whom access to diabetes care has previously been difficult. Initial feedback on this service has been very positive.

5.4 NICE Quality Standards

NICE has produced three quality standards (see section 2.5 and 2.6) which all organisations across the STP should be working towards in order to demonstrate provision of high quality care.

**NICE Quality Standard for Diabetes in Adults (QS6)**

1. Adults at high risk of type 2 diabetes are offered a referral to an intensive lifestyle-change programme.
2. Adults with type 2 diabetes are offered a structured education programme at diagnosis.
3. Adults with type 1 diabetes are offered a structured education programme 6–12 months after diagnosis.
4. Adults with type 2 diabetes whose HbA1c level is 58 mmol/mol (7.5%) or above after 6 months with single-drug treatment are offered dual therapy.
5. Adults at moderate or high risk of developing a diabetic foot problem are referred to the foot protection service.
6. Adults with a limb-threatening or life-threatening diabetic foot problem are referred immediately for specialist assessment and treatment.
7. Adults with type 1 diabetes in hospital receive advice from a multidisciplinary team with expertise in diabetes.

At present, there are gaps in service provision limiting the provision of all elements, for example, access to intensive lifestyle intervention for people with type 2 diabetes. It is imperative that, as we plan the redesign and development of diabetes services, we improve access to all the elements outlined in these standards. In particular, there is now a wealth of evidence to suggest that intensive weight management for people with newly diagnosed diabetes or those still early in the course of their condition, offers significant potential to achieve remission, thus reducing the need for expensive glucose-lowering therapies and reducing the risk of long-term diabetes related complications, which impose a significant burden on the affected individual, as well as health and social care resources.

5.5 Make Every Contact Count

Making every contact count (MECC) is an approach to behaviour change that utilises the millions of day to day interactions that organisations and people have with other people to encourage changes in behaviour that have a positive effect on the health and wellbeing of individuals, communities and populations.113

Many long-term diseases are closely linked to known behavioural risk factors; tobacco, hypertension, alcohol, being overweight or being physically inactive.

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113 NHS Health education England; Make Every Contact Count
In order to effectively tackle the rising prevalence of diabetes, it will be necessary for all STP partners to work together to address not just the clinical condition but the accompanying socio-economic factors which limit an individual’s ability to make and sustain change.

5.6 NHS Five Year Forward View

The NHS Five Year Forward View places the effective management of long term conditions as central to delivering better outcomes for patients. This scheme provides solutions to support self-management, managing avoidable demand, and reducing unwarranted variation in care.

5.7 NHS Five Year Forward View for Mental Health

The Five Year Forward View for Mental Health highlights the link between physical and mental health and builds on the behaviour change premise of the Make Every Contact Count approach. It demonstrates the impact of mental health on physical disease and health improvement, and the impact of physical ill health on mental ill health. It also makes clear that comorbidity, which includes mental and physical ill health, delays recovery and promotes longer and more frequent/intense engagement with health and social care services than would otherwise be necessary.
## Section 6  Barriers to implementation
### 6.1 Delivery risks and issues

<table>
<thead>
<tr>
<th>Risk / issue</th>
<th>RAG</th>
<th>Consequence</th>
<th>Mitigations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing and implementing plans across organisations</td>
<td></td>
<td>Transformation may not be fully embedded</td>
<td>Ensuring accountability for delivery through the Diabetes Programme Board which has been established to oversee the transformation. The transformation will be underpinned by task and finish groups which have clearly defined remits and timescales for delivery.</td>
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<tr>
<td>Lack of capacity to drive change</td>
<td></td>
<td>There has been a significant turnover in staff which is likely to continue as the 5 CCGs merge into one management structure. This means that there is a strong likelihood of delays as new staff come into post and familiarise themselves with the programme of change.</td>
<td>The members of the Diabetes Programme Board will be required to work with new members of staff in their organisations to ensure their smooth mobilisation.</td>
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<tr>
<td>Lack of funding to subsidise invest to save initiatives</td>
<td></td>
<td>This could result in delays to transformation.</td>
<td>Ensuring successful bids are submitted for national monies as they become available.</td>
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<tr>
<td>Workforce</td>
<td></td>
<td>Recruitment and retention across all disciplines is a concern throughout the STP area. Recruiting into some clinical roles may be a challenge as services develop during implementation of the Diabetes Strategy</td>
<td>Consider opportunities for service provision to maximise the benefits from technology. Identify new ways of working within teams to mitigate the impact where there are recruitment issues.</td>
</tr>
<tr>
<td>Wider political appetite and support to present the local population with choices for service delivery that require a balance between quality, service delivery outcomes and</td>
<td></td>
<td>This will be managed on an individual basis as the transformation evolves. It is expected that the transformation will lead to improved patient care and new services will be developed in collaboration with patients and their representatives. Clinical Leads across all partner organisations will be actively engaging in designing future service solutions.</td>
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<tr>
<td>Patient preference</td>
<td>A communication plan has been developed and circulated for Diabetes. Engagement will be led by individual CCGs but consistent timescales and templates will be used wherever possible. The Diabetes Programme Board will allow reconfiguration across healthcare services. The STP infrastructure will allow mobilisation to be co-ordinated at an STP level.</td>
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<tr>
<td>Need for robust engagement to support reconfiguration of services which may involve changes in clinical network arrangements and changes to the threshold of work undertaken locally</td>
<td>Need to ensure a consistent message communicated across the footprint</td>
<td>There will need to be close working between CCGs and between Communications and Engagement Teams to ensure consistency of messages. Identification of a Communications Lead who can co-ordinate the messages across the patch and ensure the media is briefed thoroughly on the case for change</td>
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<tr>
<td>Requirement to co-produce work in collaboration with service users</td>
<td>Establishment of local expert group of people living with diabetes across the STP or within individual CCG localities</td>
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<tr>
<td>NHS England not assured of delivery across STP</td>
<td>Improved relationships with NHSE and the Diabetes Clinical Network are being built. Support from NHSE and the Diabetes Network is being requested where this is felt needed and there is transparency to allow NHSE to understand the plans across the footprint.</td>
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Section 7  Programme governance
7.1 Diabetes Programme Board

Implementation of the STP Diabetes strategy across the Norfolk and Waveney footprint will be managed through a newly established Diabetes Programme Board.

The Board will be chaired by the Diabetes SRO and will meet monthly. Membership of the Diabetes Programme Board will be:

<table>
<thead>
<tr>
<th>Role</th>
<th>Organisation</th>
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</thead>
<tbody>
<tr>
<td>Chair</td>
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<tr>
<td>Clinical Lead</td>
<td>West Norfolk CCG</td>
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<tr>
<td>Programme Manager</td>
<td>West Norfolk CCG</td>
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<tr>
<td>Director-level Commissioning Leads</td>
<td>North Norfolk CCG</td>
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<td></td>
<td>South Norfolk CCG</td>
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<td></td>
<td>Norwich CCG</td>
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<td></td>
<td>Great Yarmouth &amp; Waveney CCG</td>
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<tr>
<td>Patient Engagement Lead</td>
<td>Diabetes UK</td>
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<tr>
<td>Diabetes Clinical Network</td>
<td>Diabetes Clinical Network</td>
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<tr>
<td>NHSE</td>
<td>Senior Quality Improvement Manager</td>
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<tr>
<td>Public Health</td>
<td>Norfolk County Council</td>
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<td></td>
<td>Suffolk County Council</td>
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<tr>
<td>Provider representatives</td>
<td>JPUH</td>
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<td>NNUHFT</td>
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<td>LPC representative</td>
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<td>Primary Care Leads</td>
<td>GYWCCG</td>
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<td></td>
<td>NCCG</td>
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<td></td>
<td>NNCCG</td>
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<td></td>
<td>WNCCG</td>
</tr>
</tbody>
</table>

As the Local Delivery Groups become established, the Diabetes Programme Board will seek to engage this expertise to drive strategic change locally.
7.2 STP Governance

At STP level, the Diabetes programme is an element of the Primary and Community Care workstream and will be overseen by James Bullion as SRO and will report to the STP Workstream Delivery Group.

Diagram 44: STP Reporting Structure
Section 8 Appendices

Appendix 1 – Outcomes against spend by CCG

Graphs showing the diabetes spend by CCG and whether the CCG achieves benchmarked outcomes

Appendix 1_outcomes against

Appendix 2 – Communications plan

Norfolk and Waveney STP Diabetes communications plan

Appendix 2_Diabetes Communications and Engagement Plan.docx

Appendix 3 – Terms of reference for the Diabetes Programme Board

Terms of Reference for the Diabetes Programme Board

Appendix 3_STP Diabetes Programme Board ToR 30.07.18 v2.docx

Appendix 4 – Useful resources

Strategic documents
- NHS Digital; NHS Outcome Framework
- NHS England; Five Year Next Steps
- Public Health England; Public Health Outcome Framework 2016-2019
- NHS Digital; Adult Social Care Outcomes Framework
- NHS Digital; Diabetes Audit Reports
- NHS England; Five Year Forward View
- NHS England; CCG Improvement and Assessment Framework

Developing and providing high quality services
- NHS England; A practical guide to healthy ageing
- NHS England; NDPP and Treatment and Care
- NHS Health Education England; Making Every Contact Count
- NICE guidance on Diabetes
- Diabetes UK; 15 Healthcare Essentials
- Diabetes UK; Making Hospitals safe for people with diabetes
- NHS England and Age UK; A practical guide to healthy ageing
- Diabetes UK; improving care for people with learning disabilities
- Diabetes UK; 10 point training programme for clinicians
Appendix 5 – RightCare packs for diabetes

Due to the size of these files, this has been included in the STP diabetes strategy email bundle

Appendix 6 – Public Health England Fingertips data by CCG

Due to the size of these files, this has been included in the STP diabetes strategy email bundle

Appendix 7 – What is Social Prescribing?

Social Prescribing is a means of enabling GPs, nurses and other primary care professionals to refer people to a range of local, non-clinical services. Recognising that people’s health is impacted by social, economic and environmental factors, social prescribing seeks to address people’s needs in a holistic way and support individuals to take greater control of their own health. One of Norfolk’s Social Prescribing programme’s key goals is to help reduce unnecessary demand on front-line health and social care services.

Social Prescribing is being rolled out across Norfolk and Waveney with funding from the Better Care Fund. Across Norfolk, each area is taking a slightly different approach in order to respond to different local needs. For example, in Waveney, the Lowestoft Town Centre model is run by NESCAB who provide services via referral from GP/surgery Care Navigator. Development to include referrals from Social Workers and in-reach into the Discharge Hub at James Paget University Hospitals (JPUH) is underway. In South Waveney, a rural model has been developed, run by Access Community Trust, and is currently being mobilised.

The voluntary sector can support achievement of improved health outcomes for some of the most vulnerable in our communities. Voluntary Norfolk provide a range of initiatives to help people living with a long term condition which should be integrated into the holistic care provision of diabetes services.

Appendix 8 – What services are local pharmacies already commissioned to provide?

The Medicines Use Review (MUR)/ Prescription Intervention Service is an NHSE commissioned Advanced Service. This involves accredited pharmacists undertaking structured adherence-centered reviews with patients on multiple medicines, particularly those receiving medicines for long-term conditions.

National target groups have been agreed in order to guide the selection of patients to whom the service is offered, and diabetes is included as a target group. The review also includes a basic lifestyle discussion and advice.

The New Medicines Service (NMS) is designed to provide early support to patients to maximise the benefits of their newly prescribed medication. The development of the service was based on proof of concept research which showed that an intervention by a pharmacist can help to improve patients’ adherence to their medicine. In a more recent full evaluation, evidence was conclusive that
patients who used the service experienced fewer medicines problems and made less use of other NHS services, saving money and GP time. Again, Type 2 diabetes is a targeted condition.

The NMS service involves an initial discussion with the patient about their newly prescribed medication, with follow up contact in 7 to 14 days, and again 14 to 21 days later. Any issues arising are discussed with the patient, and if necessary, appropriate information is fed back to their GP.

Awareness of the MUR/NMS services is currently poor among GPs, Practice Staff and patients alike. This means that pharmacies rarely receive referrals for MURs/NMS, mostly recruiting uptake directly with patients, with the ones agreeing to participate not necessarily those for whom the interaction would be most valuable to the individual or wider health economy.

- In Great Yarmouth & Waveney CCG the local prescribing incentive scheme includes, as a gateway condition, a requirement for GP practices to meet with their community pharmacies to discuss better collaborative working, including the referral process to MURs and NMS.
- As part of the RightCare Respiratory workstream, Norwich CCG have developed PIP screen advertisements for surgery screens which encourage patients to access these services.
- West Norfolk is currently piloting an initiative involving meeting with local pharmacies in Downham Market to discuss better collaboration, and this has been extremely well received.

### Appendix 9 – Key contacts

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<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Email</th>
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<tbody>
<tr>
<td>John Webster</td>
<td>Accountable Officer, West Norfolk CCG</td>
<td><a href="mailto:john.webster@nhs.net">john.webster@nhs.net</a></td>
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<td>STP Diabetes Clinical Lead</td>
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<td>Cheryl Thorne</td>
<td>STP Commissioning Lead</td>
<td><a href="mailto:cheryl.thorne1@nhs.net">cheryl.thorne1@nhs.net</a></td>
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