Overview of Type One and Type Two Diabetes
Mid and South Essex Sustainability and Transformation Partnership

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1. Introduction

This report presents a short overview of Type one and Type two diabetes in Mid and South Essex Sustainability and Transformation Partnership (STP). It covers the current burden of the disease, healthcare performance and health outcomes based on available data. Its aim is to provide a starting point for discussion amongst STP partners about how to improve outcomes for type one and type two diabetes.

2. The Burden of Type one and Type two diabetes in Mid and South Essex STP

2.1. The prevalence of type one and type two diabetes

At 6.6% the prevalence of diabetes in the population aged 17 years and older in Mid and South Essex STP is similar to the England average of 6.8%. This data comes from the Quality Outcome Framework (QOF) of 2017/18.

Based on demographic data, Public Health England estimates the total (diagnosed and undiagnosed) diabetes prevalence for people aged 16 years and older to be 8.4% in 2018 in Mid and South Essex.[1] Although a significant proportion of diabetics are undiagnosed the National Screening Committee has been unable to find good evidence that screening of people without diabetic symptoms should be recommended.[2] The National Screening Committee keeps its advice under review and is expected to announce if its recommendations on diabetic screening remain the same in November of this year (2019).

2.2. Risk factors for diabetes

This section considers obesity and deprivation – two major risk factors for diabetes and poor outcomes. Comprehensive information about the full range of risk factors for all types of diabetes can be found in the NICE Clinical Knowledge Summaries[3,4]

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[1] https://www.gov.uk/government/publications/diabetes-prevalence-estimates-for-local-populations
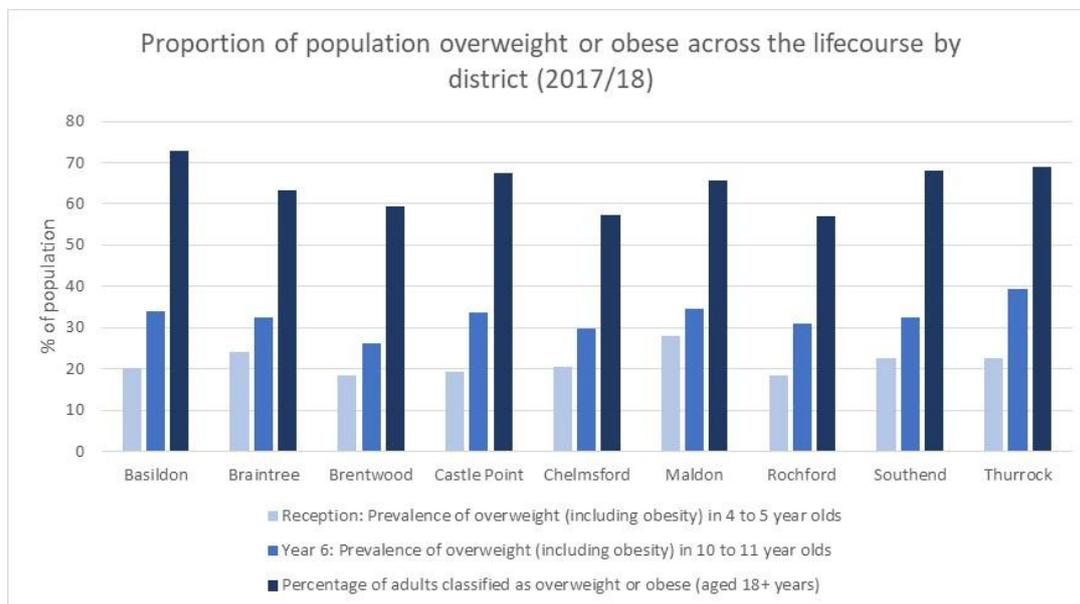[2] https://legacyscreening.phe.org.uk/diabetes
[3] Risk factors for type 1 diabetes: https://cks.nice.org.uk/diabetes-type-1#!backgroundSub:2
[4] Risk factors for type 2 diabetes: https://cks.nice.org.uk/diabetes-type-2#!backgroundSub:2

2.2.1 Obesity

Obesity accounts for 80–85% of the overall risk of developing type 2 diabetes.[5] Figure 1 shows the proportion with excess weight (overweight or obese) at different ages. It indicates that at a population level an ever-growing proportion become overweight or obese as they age.
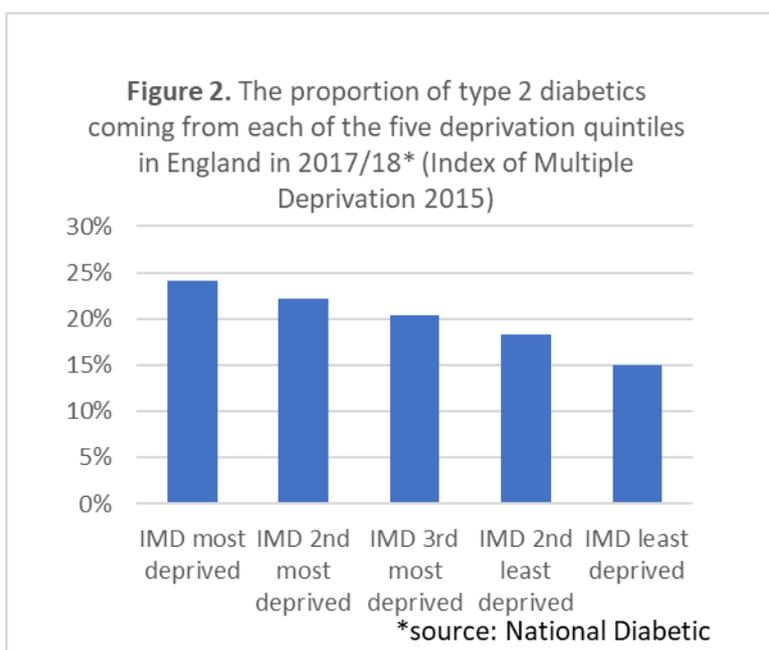
Figure 1: Obesity

Proportion of population overweight or obese across the lifecourse by district (2017/18)

■ Reception: Prevalence of overweight (including obesity) in 4 to 5 year olds
■ Year 6: Prevalence of overweight (including obesity) in 10 to 11 year olds
■ Percentage of adults classified as overweight or obese (aged 18+ years)

2.2.2 Deprivation

Deprivation is associated with risk factors for developing type 2 diabetes - obesity, physical inactivity and a diet low in fruit and vegetables. Deprivation is also associated with risk factors for poor diabetic outcomes - smoking and hypertension.

The National Diabetes Audit data show the social gradient in Type 2 diabetes. Those with type 2 diabetes are more likely to come from areas of higher deprivation (figure 2). The Clinical Commissioning

Figure 2. The proportion of type 2 diabetics coming from each of the five deprivation quintiles in England in 2017/18* (Index of Multiple Deprivation 2015)

*source: National Diabetic

Group (CCG) within the STP with the highest average deprivation (Index of Multiple Deprivation, IMD) is Southend CCG. Mid Essex and Castle Point and Rochford CCGs have the lowest level of average deprivation.[6]
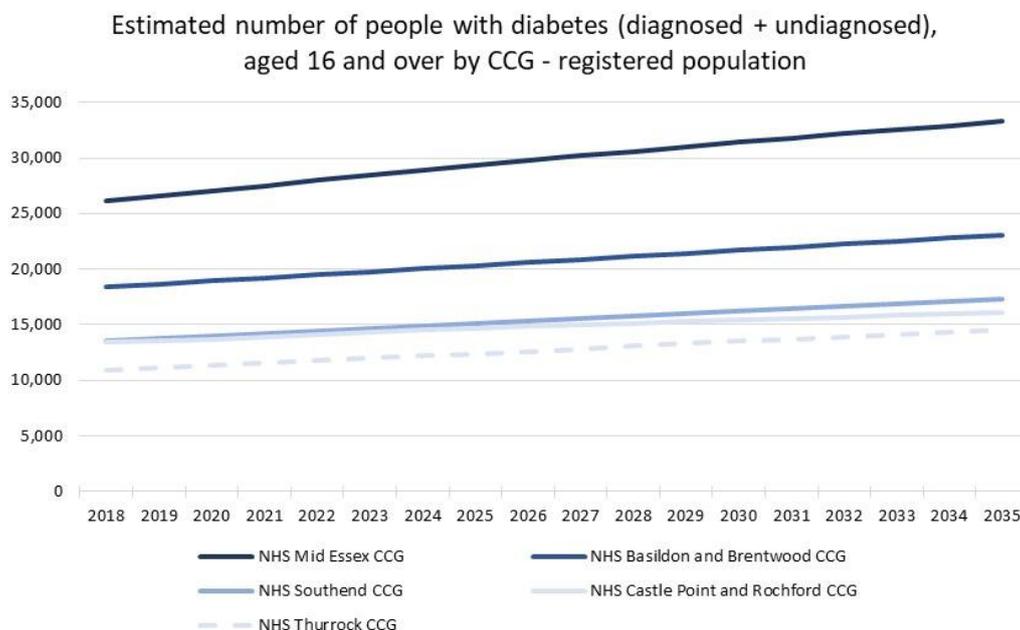
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[5] https://cks.nice.org.uk/diabetes-type-2#!backgroundSub:2
[6] https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015,

2.3 Projected trends

The prevalence of diabetes over time is increasing in line with the national trend. This is driven by an ageing population and an increasing proportion who are overweight or obese. Figure 3 shows Public Health England's predictive model for diabetic prevalence in Mid and South Essex STP[7].

Figure 3: Projected trends

Estimated number of people with diabetes (diagnosed + undiagnosed), aged 16 and over by CCG - registered population

3. Diabetes: Process measures

3.1 Care Processes for patients with diabetes aged 12 and over (2017-18)

The proportion of diabetics receiving each of eight care processes recommended by the National Institute for Health and Care Excellence (NICE) are show for type 1 and type 2 diabetics in figures 4 and 5. This data is taken from the National Diabetic Audit.[8] In the latest diabetic audit for which data is available, 2017 to 2018, 92% of GP practices in the STP submitted data. This varied from 100% of practices in Mid Essex to 78% in Southend-on-Sea. Recording of the body mass index, urine albumin and foot surveillance are care processes with the most room for improvement.

The national diabetic audit show that proportion receiving all 8 care processes across the STP ranges from 25% to 30% for type 1 and 35% to 45% for type 2. The England average is 40% for type 1 and 60% for type 2. Although the England figures are poor the STP figures are considerably lower.

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[7] https://www.gov.uk/government/publications/diabetes-prevalence-estimates-for-local-populations -
[8] https://digital.nhs.uk/data-and-information/publications/statistical/national-diabetes-audit/report-1-care-processes-and-treatment-targets-2017-18-full-report (accessed 30th September 2019)
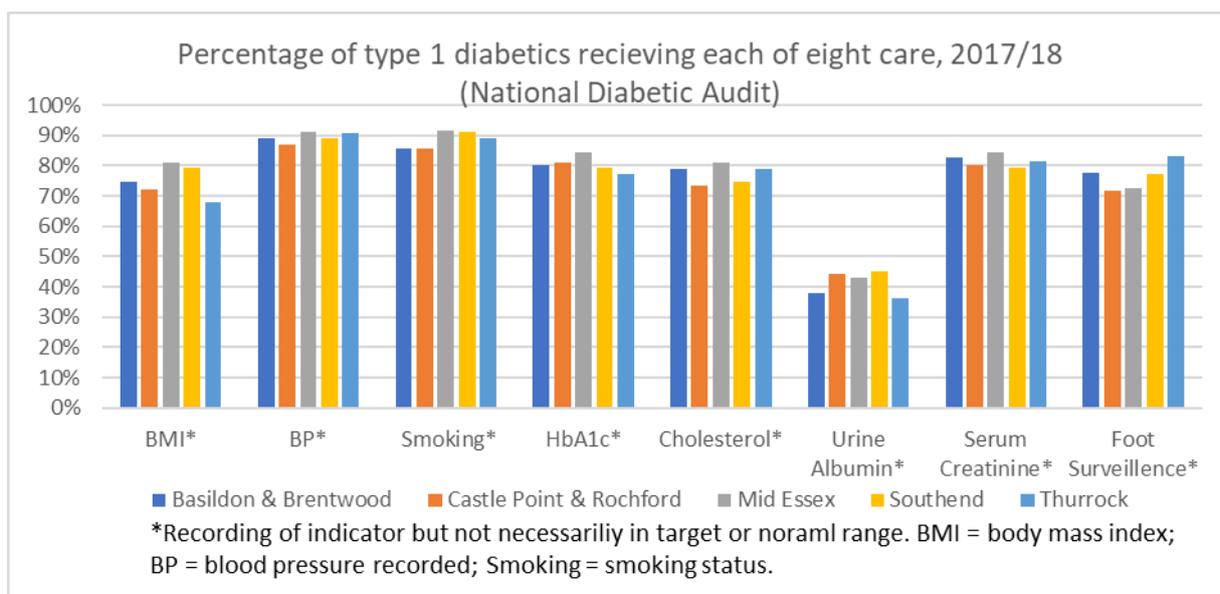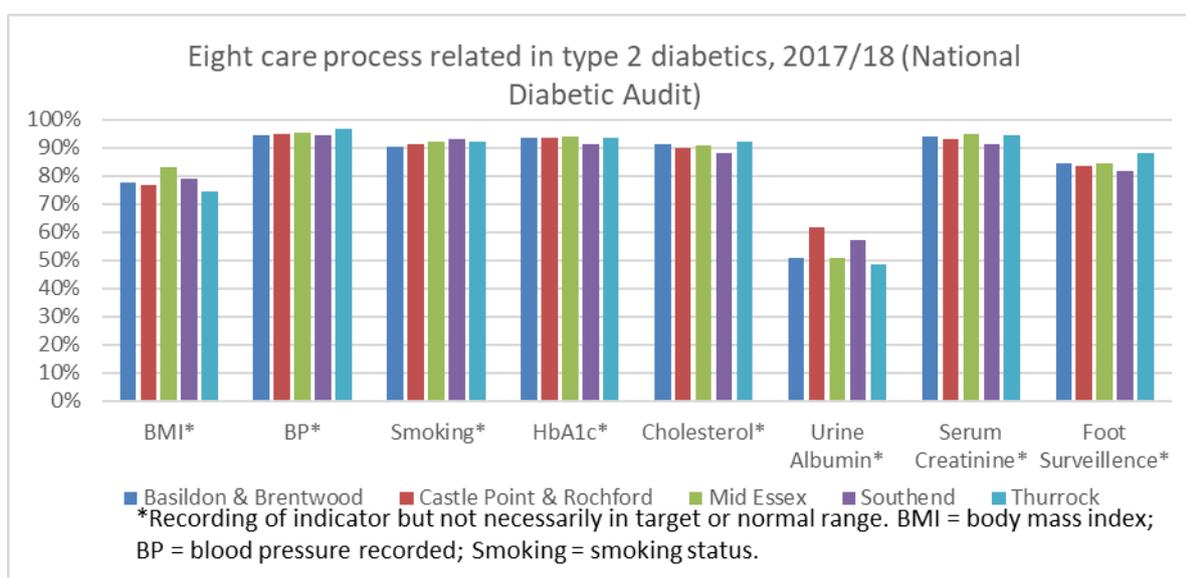
Figure 4

Percentage of type 1 diabetics recieving each of eight care, 2017/18 (National Diabetic Audit)

Figure 5

Eight care process related in type 2 diabetics, 2017/18 (National Diabetic Audit)
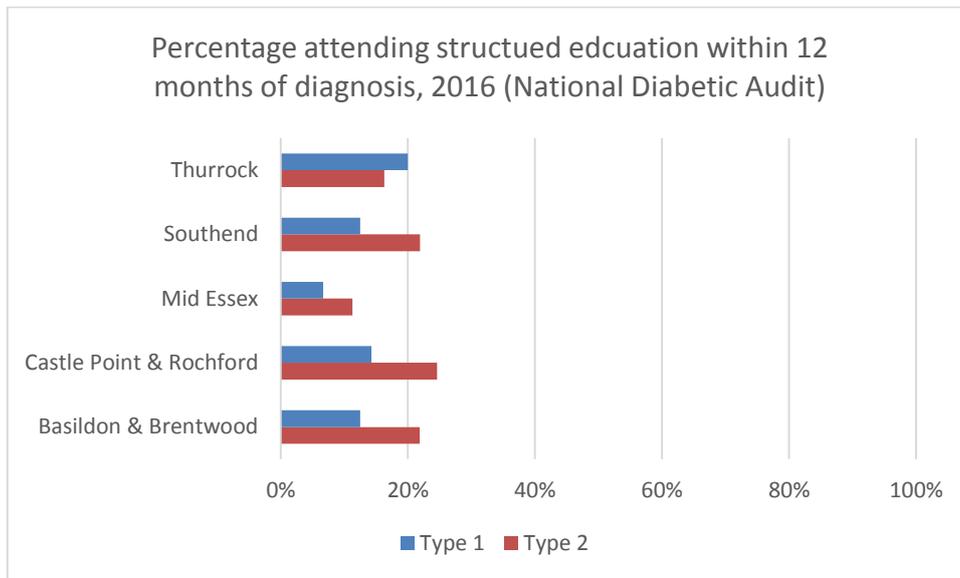
There is a ninth care process, retinal screening, commissioned and run centrally. All five CCGs are above national average (83.3%) for uptake of eye screening.

3.3 Structured Education 2017-18 – all ages

Diabetes Structured Education courses deliver information, training and support on how to manage diabetes through diet, physical activity and medication.   Essentially, they are providing the foundation support for diabetes self-management. Attendance at structured education sessions are captured in the National Diabetes Audit and shown in figure 6 below.

Figure 6

Percentage attending structued edcuation within 12 months of diagnosis, 2016 (National Diabetic Audit)

Although the numbers attending structured education is very low the STP does outperform the national averages of 5% for type 1 and 9% for type 2. This indicates that although there is great room for improvement this is something many areas struggle with.

3.4 Treatment targets for patients aged 12 and over: 2017 to 2018

The proportion of diabetic patients achieving their treatment targets for HbA1c, blood pressure and cholesterol in 2017/18 are shown in figure 7, using data taken from the national diabetic audit. The performance in Mid and South Essex is similar to average in England.

Figure 7

Treatment targets reached in patients with type 1 or type 2, 2017/18 (National Diabetic Audit)
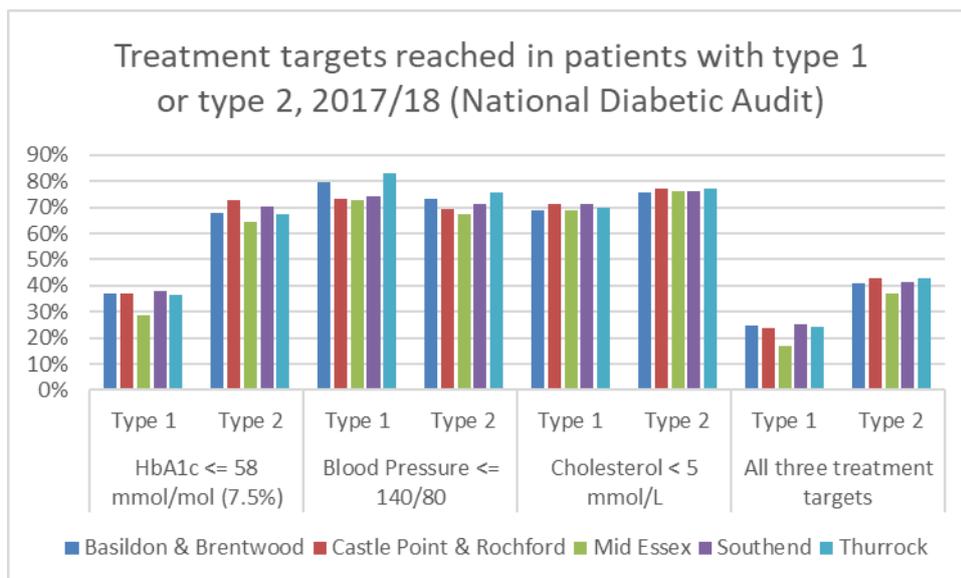
The wide variation amount GP practices in the proportion of their type 2 diabetics achieving all three care targets is shown in figure 8 below.
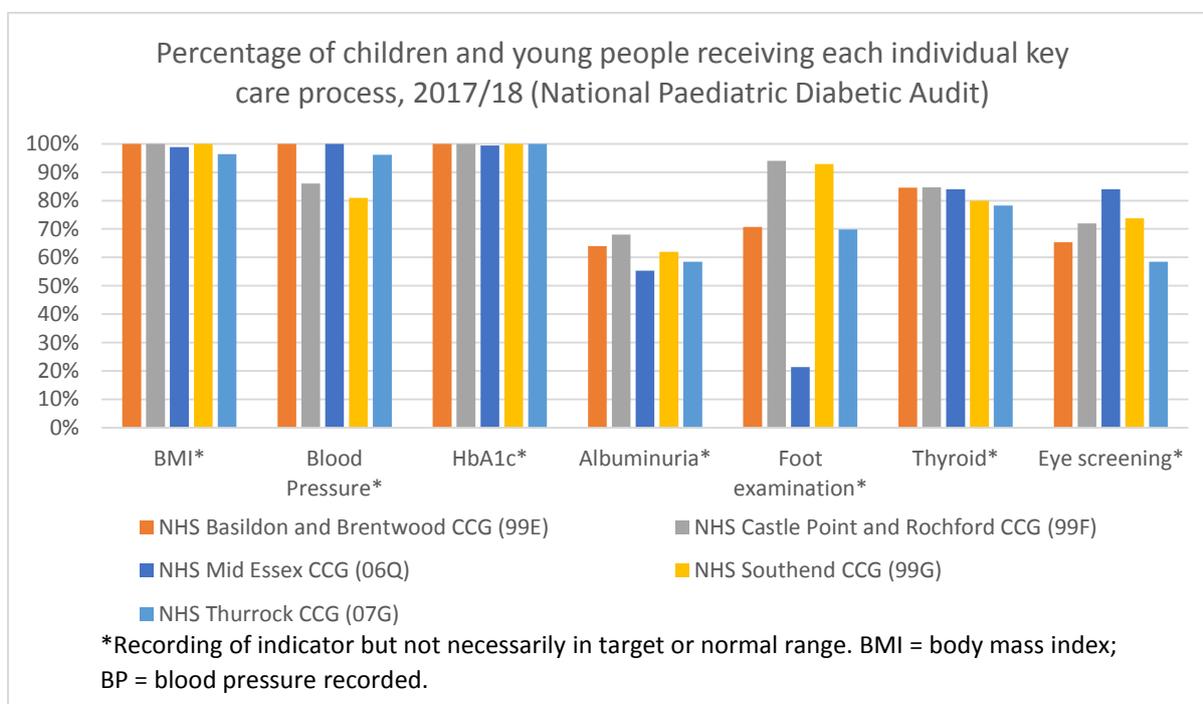
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Figure 8: Variation for treatment targets for type two diabetes by GP practice

People with Type 2 diabetes who achieved all 3 treatment targets by GP practice with Mid and South Essex STP
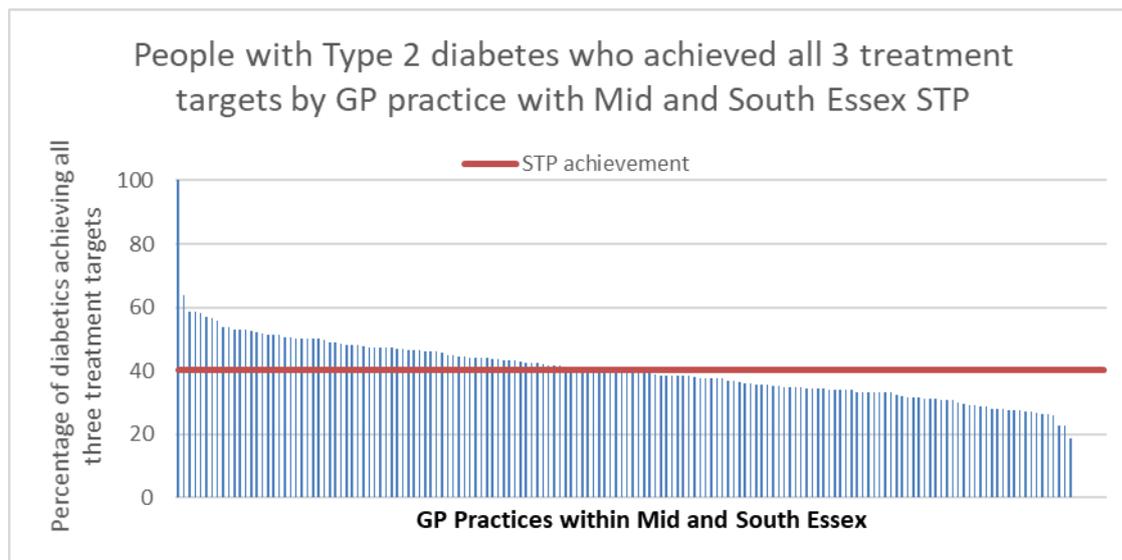
3.5 The National Paediatrics Diabetes Audit

The 2017/18 National Paediatrics Diabetic Audit captured information on all children and young people under the care of a consultant paediatrician. The data is submitted by paediatric diabetes units. The percentage of children and young people (aged 12 to 24) receiving the recommended key care processes is shown in figure 9.

Figure 9

Percentage of children and young people receiving each individual key care process, 2017/18 (National Paediatric Diabetic Audit)

Legend:
- NHS Basildon and Brentwood CCG (99E)
- NHS Castle Point and Rochford CCG (99F)
- NHS Mid Essex CCG (06Q)
- NHS Southend CCG (99G)
- NHS Thurrock CCG (07G)

*Recording of indicator but not necessarily in target or normal range. BMI = body mass index; BP = blood pressure recorded.

In this audit Mid Essex appears to be an outlier in the STP. In Mid Essex 21.3% of diabetes patients had foot surveillance.

3.6 Diabetes in pregnancy

The next annual report of the National Pregnancy in Diabetes Audit will be released on 10 October 2019 and will include all pregnancies from January 2017 to December 2018. It was not available at the time of writing this report.

4.Diabetes: Outcomes

Data is regularly published on foot care of diabetic patients. Other health outcomes for diabetes patients, such as the excess death rate, are not published as frequently with no more recent publication than 2015-16. For this reason, only foot care outcomes data is included in this report.

Southend CCG is an anomaly when it comes to foot care. Whereas hospital spells for diabetic foot disease in the other CCGs of the STP are in single figures per 10,000 diabetics, Southend's figures are in the hundreds (figure 10, a) to e)). Such a difference is most likely to be due to a data collection error, unless diabetic patients are systematically managed very differently in Southend compared to the rest of the STP.

The median length of hospital stay for diabetic foot conditions is also different in Southend CCG compared to the other CCGs in Mid and South Essex. The average stay in Southend is shorter. In 2015/16 to 2017/18 the median stay was 4 days in Southend whereas the range in other CCGs was 6 to 12 days (figure 10, a) to e)). The need to understand how diabetic foot and leg management is managed in Southend CCG is highlighted by the very high rate of major lower limb amputation (defined as above ankle) for diabetes (figure 11).

Figure 10: Hospital spells for diabetic foot disease and the median length of stay for diabetic foot conditions (hospital episode statistics)
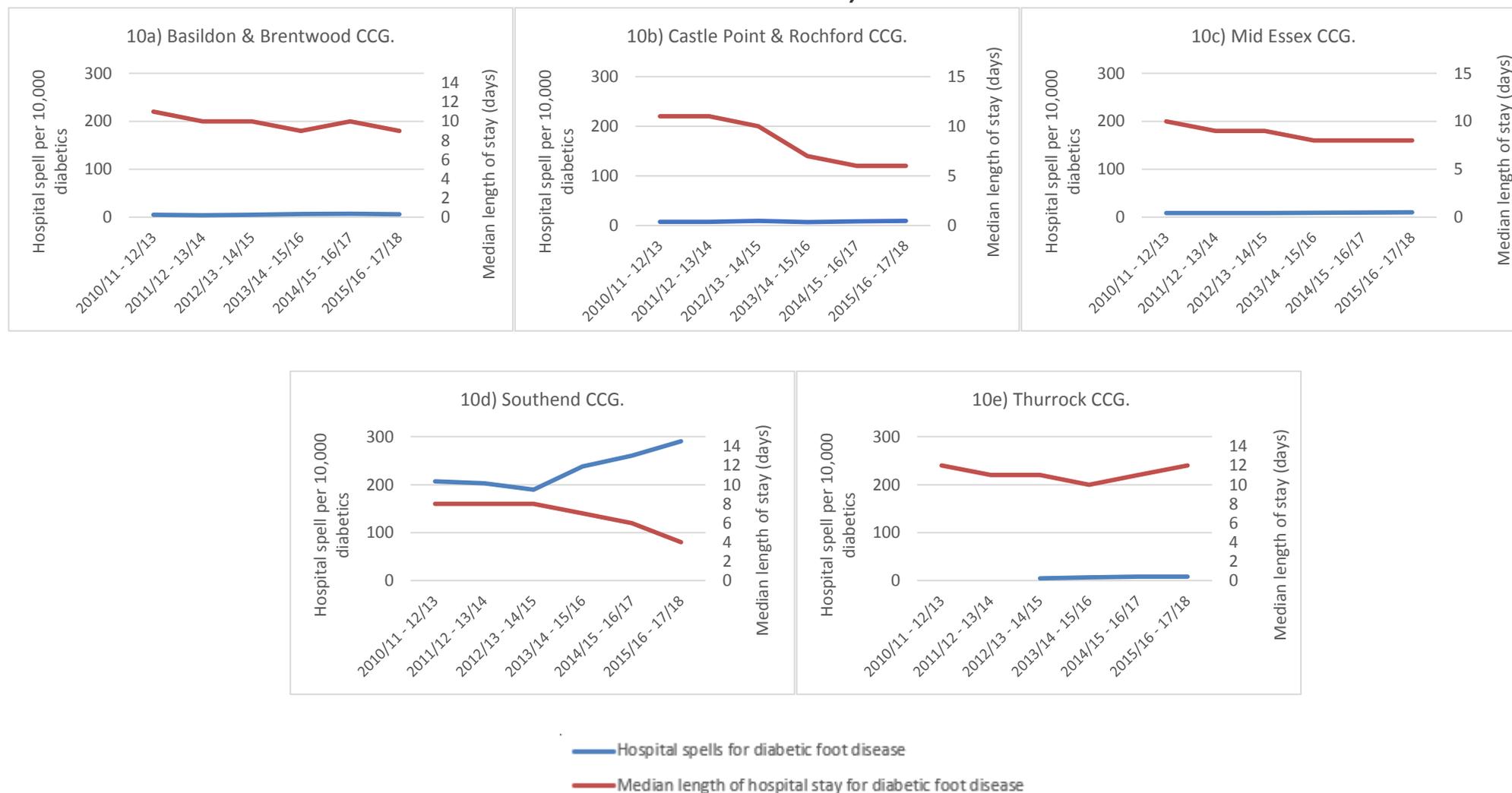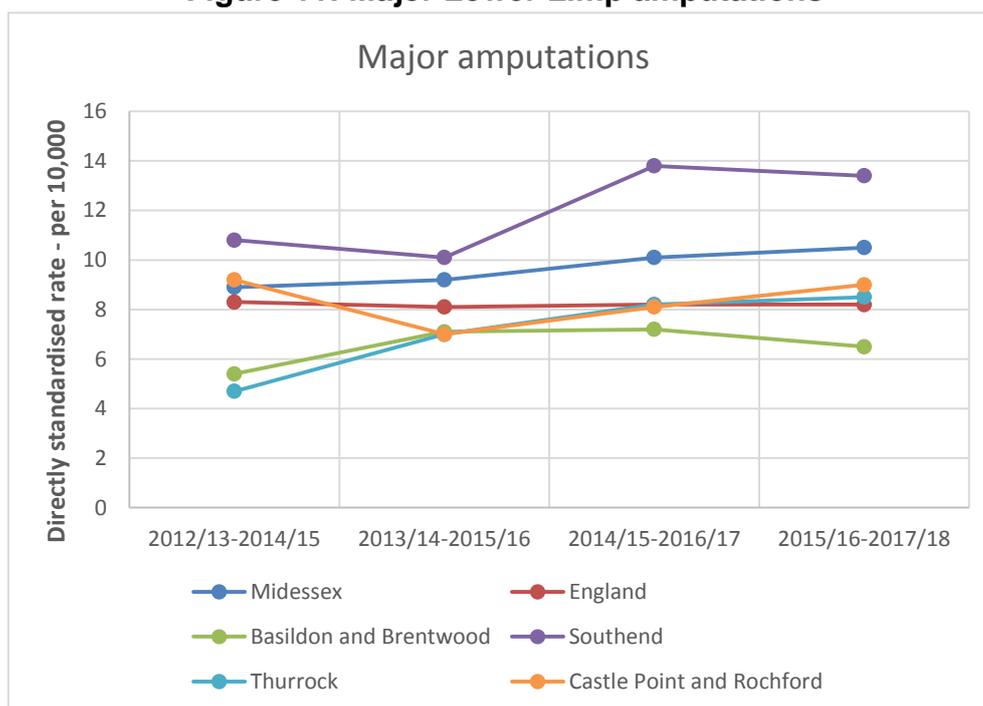

10a) Basildon & Brentwood CCG.

10b) Castle Point & Rochford CCG.

10c) Mid Essex CCG.

10d) Southend CCG.

10e) Thurrock CCG.

—— Hospital spells for diabetic foot disease

—— Median length of hospital stay for diabetic foot disease

Figure 11: Major Lower Limp amputations

5. Areas for discussion

The above review has been written using readily available data. The insights of clinicians, patients and carers have yet to be sort. This document therefore provides an incomplete picture. The picture it provides suggests areas most likely to benefit from further exploration.

- A significant increase in diabetic prevalence is predicted. This will disproportionately affect populations in deprived areas. How is this to be managed?

- The high proportion of the population overweight or obese is a major avoidable cause of type 2 diabetes. What weight management strategies should be adopted?

- Submission of data to the National Diabetic Audit is patchy across the STP. This impairs the monitoring of the services provided.

- How can the coverage of care processes be increased? The processes that seem to have the greatest room for improvement are measurement of body mass index, urine albumin, and foot surveillance. There seems to be a particular issue with paediatric diabetic foot surveillance in Mid Essex but this might be a data collection issue.

- Only a small minority of newly diagnosed diabetics attend the structured education. How can the STP understand why this is, how access may be improved or what alternative ways of helping patients and carers take control of their condition could be tried?

- Why does Southend CCG have a rate of hospital spells for diabetic foot disease two orders of magnitude above the other CCGs in the STP?

- What is it in the pathways of care in Southend CCG that leads to the high lower limb amputation rate?

- Linking of primary care, secondary care and mortality data could be used to monitor the outcomes of diabetic care across the STP. Can this be achieved?

With the engagement of patients, carers, clinicians and health managers the population outcomes for diabetics can be improved. Not to capitalize on this potential would be an opportunity lost.