Diabetes Health Needs Assessment for Solihull Report for Solihull Clinical Commissioning Group

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Lead author: Allan Reid, Speciality Registrar Public Health, Solihull Metropolitan Borough Council

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Executive Summary

Purpose

Diabetes in the UK is a major public health problem requiring urgent action and prevalence is increasing in Solihull along with the cost in providing care to those affected. This rise in expenditure necessitates coordinated action on behalf of the CCG and local authority public health, together with primary, secondary, community care and patient groups to devise new strategies to prevent new cases and ensure efficient, cost-effective care for those with the condition. Currently, we know that there is variation in diabetes services and that not all patients receive all eight care processes recommended by NICE. The purpose of this diabetes needs assessment is to identify the needs of the Solihull population in relation to diabetes, working with our local partners to formulate recommendation that will help inform future cost-effective and impactful commissioning. Solihull CCG has committed to leading on behalf of partners in Solihull a system wide review of diabetes in Solihull-this needs assessment contributes to this work and the review will continue to be jointly undertaken with Solihull Public Health.

The scope of this needs assessment has included a systematic review of data and evidence for all types of diabetes across the population of Solihull. What is currently out of the scope of this document is an in depth review of the service quality, effectiveness and outcomes- this will form part of the on-going system wide review. Stakeholder engagement will also be included in this review, although this assessment has looked at national and local data on patient experience and public involvement in relation to diabetes and long term conditions.

Summary of key findings

- The percentage of people 17+ diagnosed with diabetes is higher in Solihull CCG than the England average
- There is a gap in diagnosed prevalence and estimated prevalence in adults that requires investigation
- By 2025 the projected prevalence of diagnosed and undiagnosed diabetes within Solihull could increase to over 16,000 (with an increase in prevalence from 8.8% to 9.2%)
- Obesity is also increasing in Solihull and there is a strong relationship with diabetes
- Not enough data is available to show diagnosed and estimated prevalence amongst children and young people
- Not enough detailed data is available to understand the real inequalities within Solihull. Further analysis is required
- Further investigation is required to understand the impact of poor management and/or late diagnosis on health complications
- Co-morbidities are set to increase with increasing prevalence and further work is required to develop appropriate models of care and personalised care plans
- Only two thirds of patients with diabetes in Solihull are receiving all eight care processes

- There is significant variation within primary care of patients achieving the recommended treatment targets, particularly so for good blood pressure control which is significantly below the national average across primary care services within the borough
- There is no clear diabetes prevention strategy for Solihull that is being coordinated across agencies
- There is no evidence that shows the extent to which structured education is improving outcomes locally and or how assessable these programmes are.

Conclusion

Prevalence of diabetes is set to increase in Solihull, adding further challenges in terms of managing resources to meet the needs of patients. The current service model of diabetes care in Solihull needs to adapt to meet these demands. More also needs to be done to reduce the risk of people in Solihull from developing diabetes by identifying those at risk earlier and providing them with the knowledge and tools to prevent the onset of the condition. At a population level, we must improve awareness across Solihull about the risk factors for diabetes so that people can take action to reduce their risk. Developing a Solihull-wide strategic approach to diabetes prevention should be considered a priority. As well as improving management of diabetes and reducing avoidable complications, working across agencies in this task will help to ensure Solihull develops high quality and patient-focused services.

Contents:

1. Introduction

Diabetes is a group of diseases with different causes but similar manifestations. One common feature is a raised level of glucose in the blood. This is due to the lack of the hormone insulin and/or an inability of the body to respond to insulin. Insulin is a hormone that enables the glucose from food to be incorporated into cells, and subsequently to be used as energy by the body.

Although diabetes cannot be cured, it can be clinically managed and controlled (usually in Primary Care), and there is much that people with diabetes can do to support their own health. However, people with diabetes that is poorly controlled are, in the short term, at risk of diabetic ketoacidosis, a potentially life-threatening syndrome that can include nausea, vomiting, dehydration, abnormal breathing, confusion, and in some cases, coma. In the longer term, poor diabetic control increases the risk of complications such as heart attack, stroke, blindness, kidney failure, and limb amputation. On average, diabetes reduces life expectancy for someone with Type 1 by more than 15 years and Type 2 by up to 10 years. In this profile, we focus on diabetes in adults in Solihull. We describe its prevalence, the degree to which the condition is being controlled in our population in Primary Care, the frequency of complications, the services being provided locally, including those in Secondary Care, mortality issues, local initiatives, and some of the costs of treatment. Finally, we present and discuss conclusions and recommend further action.

Long term complications are likely to occur if levels of glucose in the blood are left unchecked. Common complications are: eye disease, potentially leading to blindness; kidney failure; foot ulcers and amputations. Diabetes is also associated with an increased risk of coronary heart disease and hypertension. In extreme circumstances ketoacidosis or hypoglycaemia may occur, which can lead to coma and death, if untreated.

It is a disease that can be prevented through lifestyle measures. Those affected may go undiagnosed for some time, but once diagnosed, diabetes can be managed and treated successfully. Early detection and management greatly reduces the risk of complications and early death

1.1. Types of diabetes

Although there are many different types of diabetes, some of which are quite rare, this needs assessment mainly focuses on the more common forms of diabetes, known as Type 1 and Type 2.

Impaired Glucose Regulation/Tolerance

Impaired Glucose Regulation (IGR) or Impaired Glucose Tolerance (IGT) are terms that refer to blood glucose levels that are above the normal range but that are not high enough for the diagnosis of type 2 diabetes. Blood glucose levels that are above the normal range are often referred to as pre-diabetes, this term is used to define the combination of categories of impaired glucose tolerance (a 2 hour glucose level of 7.8 – <11.1 mmol/l) and/or impaired fasting glucose (glucose 6.1 - <7.0 mmol/l)[1]. This additional definition was added in 2011 HbA1c between 42 and 47 mmol/mol. These categories were originally introduced by a World Health Organisation (WHO) Expert Committee on

[1] WHO (2006) Definition & Diagnosis of Diabetes Mellitus

the Diagnosis and Classification of Diabetes to replace other terms such as “borderline” or “chemical” diabetes which were thought to be potentially stigmatising.

The WHO organisation (2006) describes IGT as a state of increased risk of progressing to diabetes, although notes many may revert to normal. IGR and IGT are not clinical entities but a risk factor for future diabetes and adverse outcomes. Identifying those with IGT, for example, through NHS health checks and targeted case-finding of those who are overweight and obese are therefore important so that preventative interventions can be provided.

1.2. Diabetes Mellitus Type 1

Type 1 diabetes develops most frequently in children, young people and young adults. About 15 per cent of people with diabetes in England have Type 1 diabetes. Although it is far less common than Type 2 diabetes, it is more immediately evident. The symptoms of Type 1 diabetes can develop very rapidly. These include increased thirst and urine production, weight loss despite increased appetite, tiredness and blurred vision. Type 1 diabetes is usually diagnosed as a result of the presence of a combination of characteristic symptoms plus a high blood glucose level. People with Type 1 diabetes need daily injections of insulin to survive. To prevent acute complications they also need to maintain their blood glucose within certain limits, which will require adjustments in their diet and lifestyle. Failure to take insulin can result in diabetic ketoacidosis. If the balance between diet, physical activity levels and insulin dosage is not maintained, this can lead to hypoglycaemia (very low blood glucose). Both conditions can lead to coma and, if untreated, death.

1.3. Diabetes Mellitus Type 2

Type 2 diabetes is most commonly diagnosed in adults over the age of 40, although increasingly it is appearing in young people and young adults. About 85 per cent of people with diabetes in England have Type 2 diabetes, which in many cases could either have been prevented or its onset delayed. Glucose builds up in the blood, as in people with Type 1 diabetes, but symptoms appear more gradually and the diabetes may not be diagnosed for some years. As the blood glucose levels rise, symptoms may develop which include tiredness, frequent urination, increased thirst, weight loss, blurred vision and frequent infections. Type 2 diabetes is often detected during the course of a routine examination or investigation of another problem. People with Type 2 diabetes need to adjust their diet and their lifestyle. Many are overweight or obese and will be advised to lose weight. Some will also need to take tablets and/or insulin to achieve control of their blood glucose level.

1.4. Gestational Diabetes Mellitus

Diabetes that occurs during pregnancy is known as gestational diabetes mellitus (GDM). It occurs because the body cannot produce enough insulin (a hormone important in controlling blood glucose) to meet its extra needs in pregnancy. Approximately 650,000 women give birth in England and Wales each year, and 2-5 per cent of pregnancies involve with diabetes. Approximately 87.5 per cent of pregnancies complicated by diabetes are estimated to be due to gestational diabetes (which

may or may not resolve after pregnancy), with 7.5 per cent being due to type 1 diabetes and the remaining 5 per cent due to type 2 diabetes[2].

Gestational diabetes usually starts in the middle or towards the end of pregnancy.

1.5. Other Types of Diabetes

Rarer forms of diabetes include maturity onset diabetes of the young (MODY); the estimated prevalence is 1 to 2 per cent of all diabetes cases in the UK[3].

Some children develop diabetes as secondary to surviving treatment for other conditions including cystic fibrosis, cancer chemotherapy and thalassemia.

[2] NICE (2008) Diabetes in Pregnancy: Management of diabetes and its complications from pre-conception to the post-natal period

[3] DOH (2007) Making Every Young Person with Diabetes Matter

2. Review of the Literature

The overall purpose of this needs assessment is to inform a system-wide review of the diabetes care pathways for those living in Solihull. The wider review will consider ways to make current pathways more integrated and how to achieve this integration. This section is a rapid review of the evidence around integrated models of care for diabetes, including essential elements for successful integration, models of best practice and key lessons learned from existing integration initiatives.

2.1. Background

Diabetes is a major challenge and economic burden to the NHS. Diabetes is estimated to have cost the UK £9.8 billion in direct costs in 2010 -2011, which equates to approximately ten per cent of the total NHS health resource expenditure[4] Furthermore, Hex et al (2012) found 80 per cent of NHS spending on diabetes goes into managing avoidable complications. The large volume of preventable complications therefore implies current diabetes services are not doing enough in ensuring the management of diabetic patients provides safe and effective care; "better management of diabetes has the potential to cut costs and improve the care of people with diabetes"[5].

The adoption of integrated care planned around the needs of the patient and coordinating multidisciplinary teams providing timely access to specialist care is believed to be a key driver in the challenge of improving diabetes care. The recent publication of '*Admissions Avoidance and Diabetes: Guidance for Clinical Commissioning Groups and Clinical Teams*' (2013) states that "clinically led managed networks for diabetes in England is the approach needed to practically organise the system of diabetes care to reduce admissions by delivering high quality coordinated care using care pathways, guidelines, monitoring outcomes and team-working across the different providers and commissioners to make improvements".

NHS England's vision for tackling diabetes in 2014 has been outlined in a new plan, '*Action for Diabetes*' (NHS England, 2014), which supports integrated care for diabetes. The plan calls for better prevention of Type 2 diabetes, earlier diagnosis of all diabetes, and support for people to manage their diabetes better and improve their quality of life. The report states that NHS England's work to improve diabetes care will be based on the 'house of care' model of integrated services around the needs of the individual.

This evidence summary aims to explore integrated models of care for diabetes focusing on what type of diabetes care can safely be delivered out of hospital and as close to home as possible, and seeks to find models that deliver the most clinically appropriate care in the most economically efficient setting.

For the purposes of this literature review, pathway integration is defined as the process of integrating care and commissioning outcomes of whole pathways of care aims to meet the patients' needs rather than those of the service provider and is deemed essential to reduce duplication of – and gaps in – services. Diabetes UK (2013a) defines integrated diabetes care as "both the integration of a health care system and co-ordination of services around a patient".

[4] Hex et al (2012) Estimating the current and future costs of Type 1 and Type 2 diabetes in the UK
[5] Diabetes UK (2013) State of the Nation

2.2. Components and Quality Standards of diabetes care

Diabetes UK (2013a) outlines the following broad, essential components of diabetes care:

- Cardiovascular care
- Learning difficulties / mental health
- End of life care
- Kidney care Services for older people
- Inpatient and emergency
- Foot care
- Eye services
- Neuropathy care
- Children and young people
- Pregnancy

In addition to these components of care NICE Quality Standards for diabetes set out 14 Quality Standards that set out achievable markers of high-quality, cost-effective adult diabetes care. The 14 standards cover the following key elements of diabetes care:

- Structured education
- Nutrition and physical activity advice
- Care planning
- Glycaemic control
- Medication
- Insulin therapy
- Preconception care
- Complications
- Psychological problems
- 'At risk' foot
- Foot problems requiring urgent medical attention
- Inpatient care
- Diabetic ketoacidosis
- Hypoglycaemia

Both the components of care and NICE quality standards are important to consider when commissioning diabetes services.

Additionally Diabetes UK (2013a) states that delivery of a diabetes service is more than commissioning the individual components of care as part of a care pathway. Key components of a well-commissioned diabetes model will address the following pillars of integrated care:

- Integrated IMT systems
- Aligned finances and responsibility
- Care planning
- Clinical engagement and partnership
- Robust shared clinical governance

NHS England's vision for tackling diabetes in 2014 also recognises that more needs to be done than delivering individual components of the care pathway and base their action plan on the 'house of care' model[6]. The model is based on a house containing the following components:

- personalised care planning is in the centre – a decision coaching process is described which involves clinicians and patients working together to decide priorities and actions
- engaged and informed patients are represented as the left wall – it is recognised that some patients will find this easier than others and support mechanisms need to be in place to help
- committed and connected health professionals are represented as the right wall – this requires professionals to adopt a consulting style which enables shared decision making and self-management
- organisational systems and processes are represented as the roof – this includes systems for identifying and communicating with patients, sharing data, monitoring outcomes as well as tools for patients and their carers/families
- responsive commissioning is the foundations – this involves identifying services across health and social care which can meet needs and improve outcomes – for example, weight management and smoking cessation – and identifying a range of potential providers

2.3. Roles of specialist and generalist health care professionals

'*Commissioning Specialist Diabetes Services for Adults with Diabetes: A Diabetes UK Task and Finish Group Report*' produced by Diabetes UK (2010) recommends that specialist diabetes services are provided within an acute setting for those patients whose needs are too complex for them to be seen in a community setting, and include services that are provided by a multidisciplinary team. Examples include:

- people newly diagnosed with Type 1 diabetes
- people with Type 1 diabetes (for carbohydrate counting and/or the use of insulin pumps/or continuous blood glucose monitoring)
- children with diabetes
- pregnant women and those planning a pregnancy who are diabetic
- patients with significant and ongoing cardiovascular or peripheral vascular disease
- young patients with diabetes of an undefined nature
- patients with active foot ulcers or uncontrolled neuropathic pain
- patients with diabetes and renal disease or retinopathy requiring active management or complex monitoring
- people whose risk factors for complications have been unsuccessfully controlled in primary care
- patients with recurrent hypoglycaemia
- patients with neuropathy, especially autonomic neuropathy
- inpatient care

Furthermore, the report makes explicit recommendations for specialist involvement in the following areas:

[6] NHS England (2014) Action for Diabetes

- Transitional/young person's diabetes service – primary care teams generally do not deliver specialist diabetes care to children and young people, transitional care will usually be organised and delivered by specialist teams.
- Diabetic pregnancy service – all pregnant women with diabetes require access to a skilled team of specialist diabetes expertise and obstetric support.
- Continuous subcutaneous insulin infusion (CSII) service / insulin pumps – only a trained specialist team should undertake CSII initiation and management of CSII treated patients.
- Psychological services for people with diabetes – a range of psychological skills will be required to deliver specialist psychological support to people with diabetes with complex psychological needs associated with their diabetes.
- Diabetes renal service – specialist assessment should be available to patients with, or at high risk of, renal disease.
- Diabetes nephrology services should have appropriately trained staff and systems in place to organise service effectively and ensure rapid access for patients with deteriorating eGFR or worsening proteinuria.
- Diabetic foot service – a specialist diabetes foot care service should be available, consisting of staff with a specialist interest in diabetes foot care.
- Ophthalmology service – specialist eye services are necessary to treat and manage diagnosed sight threatening retinopathy.

In the move towards integrated care it is recognised that an increasing number of community diabetes consultants are employed to deliver and co-ordinate services in a community setting only[7] As well as direct clinical care, the Royal College of Physicians, Royal College of General Practitioners, and Royal College of Paediatrics and Child Health (2008) 'Teams without walls' integrated model of care conclude that the role of the specialist in population-based healthcare covers the seven areas:

- Healthcare delivery planning: advisory role across the whole population to enable the translation of clinical evidence into practice.
- Clinical advisory role: development of guidelines and related documents.
- Educational role: use of multiple formats to educate non-specialists and trainees in clinical and related specialist area.
- Community role: to champion the treatment of disease or other areas within the community, and form links with community groups.
- Remote clinical role: provision of clinical advice about patients to other practitioners.
- Direct clinical care
  a) Joint consultation: together with generalist clinicians where the need for combined skills and knowledge will complement clinical care
  b) Direct clinical care: where specialist skills and knowledge are required that are beyond those of generalist practitioners.
- Research: to advance understanding in the specialist area by direct or indirect involvement in research, or evaluation of research and appropriateness of translating research into practice.

[7] Diabetes UK (2010) Commissioning Specialist Diabetes Services for Adults with Diabetes

Currently there are no nationally recognised standards for which patients should receive specialist care. The organisation of specialist services is dependent on local demographics, facilities and staff skills[8]. Each CCG will have their own local providers with their own strengths all of which needs to be considered when reviewing the wider diabetes services.

2.4. Evaluation of integrated care models

There are a number of national and international examples of diabetes care pathways where some degree of integration has been implemented. Overall review of these examples shows the following:

- Integrating primary and secondary care service planning in managed disease networks has demonstrated a reduction in emergency admissions for some ambulatory long term conditions (including diabetes) in the three years after networks were implemented in Scotland[9].
- Research from Australia has demonstrated positive results for the management of complex type 2 diabetics, specifically better glycaemic control using a model which incorporated the principle of a GP specialist supported by an Endocrinologist and diabetes educator within a community-based general practice setting[10].
- A small scale observational UK study found that integrated primary and secondary care (general practitioner-consultant clinic) for patients with diabetes with poor glycaemic control can be effective at controlling diabetes and can save money, although due to the sample size results are indicative and larger scale studies are required[11].
- Integrated care models are innovative and therefore the evidence base is weak. Unsurprisingly there are no systematic reviews that look at integrated diabetes care models. National initiatives are all in their pilot or early stages and therefore have not just demonstrated benefits in terms of changes in service use or patients outcomes.

Although evidence of impact on patient outcomes or service use is limited, evaluation of some of the national initiatives shows the following:

- Various integrated diabetes models from across the country have been published (Derby, North London, Portsmouth Super Six, Sheffield) demonstrating commendable features but these do not represent all the different models across the UK nor are they the only models possible – there is no 'one size fits all' model[12]
- There is no single 'best practice' model and joining up of services in pivotal, irrespective of how this is achieved[13]
- The organisation of specialist services is dependent on local demographics, facilities and staff skills[14]
- CCGs and key stakeholders are at different stages of development, with local implementation dependent upon local infrastructure and competing health need priorities[15]

[8] Diabetes UK (2010) Commissioning Specialist Diabetes Services for Adults with Diabetes
[9] Guthrie et al, 2010 cited in JBDS-IP, 2013
[10] Russell et al (2013) Models of Care for the Management of Complex Type 2 Diabetes
[11] Dashora, Radia and Radia (2011) Integrated Care: Improving Glycaemic Control in Joint Clinics
[12] (Diabetes UK, 2013a Best Practice for Commissioning Diabetes services: An Integrated Approach
[13] Diabetes UK (2013a) Best Practice in Commissioning Diabetes Services
[14] Diabetes UK (2010) Commissioning Specialist Diabetes Services for Adults with Diabetes
[15] Diabetes UK (2010) Commissioning Specialist Diabetes Services for Adults with Diabetes

- Additional funding is required to support the implementation of integration – North West London received substantial financial and other support from NHS London
- Local health needs and service gaps need to be identified and models developed accordingly

The Royal College of Physicians, Royal College of General Practitioners, and Royal College of Paediatrics and Child Health (2008) *'Teams without walls'* integrated model of care has identified a number of common features of successful integration initiatives:

- Clinical leadership
- High-quality partnership between clinician and professional manager
- Primary and secondary partnerships
- Committed commissioners willing to innovate and fund flexibly
- Clear patient focus for a defined group
- Clear governance arrangements

They have also identified elements which accompany failure:

- Clear separation of managerial and clinical aims
- No clinical leadership
- Targets with unintended negative consequences
- A culture of competition rather than collaboration
- Financial flows that encourage efficiency without considering effectiveness
- A 'command and control ethos' that does not value learning

In more practical terms the following major challenges to integrated working have been identified:

- Integration requires a change in current mind-set that moves away from providing health services in silos.
- Changes in policy making, regulation, financing and organisation of health care systems are needed if meaningful outcomes are to be achieved.
- The incentives / disincentives of Payment by Results need to be rebalanced to bring integrated specialist and generalist care closer to the patient's home
- Moving to outcome based commissioning needs new and better commissioning tools such as contracts different to those commissioners currently use (Corrigan, Grummitt and Lucas, 2012). For example, North East Essex CCG (2013) have awarded an innovative new five-year contract for the delivery of adult diabetes services to Suffolk GP Federation, a not-for-profit organisation, which will work with local GP practices in the Colchester and Tendring areas and with Colchester Hospital University Foundation Trust. Twenty-five per cent of Suffolk GP Federation's income will be based on results. These include the achievement of top quarter placements in national performance tables for HbA1c (a blood test which checks diabetes is under control) and for cholesterol. The completion of annual reviews and ensuring all newly diagnosed people with diabetes receive the right education about their condition will also be paid by results.
- The difficult part in implementing a new integrated model of care in Portsmouth was convincing the acute trust of the model as the loss of revenue was for the acute trust to bear.

- Some patients choose to stay under secondary care due to fears GPs do not have the specialist knowledge to manage their condition, low confidence in GPs, belief insufficient time and resources in primary care and/or poor patient motivation.

2.5 Integrated Diabetes Services for Children and Young People

Due to the relatively small numbers involved, there is less literature evidencing best practice when integrating diabetes care for children and young people (CYP). A 2005 Department of Health (DOH) *Guide to Promote a Shared Understanding of the Benefits of Managed Local Networks* includes a section on CYP services which suggests that

"…managed local networks will operate at many different levels and scales of operation……The exact nature and optimal size of networks depends on their rationale and purpose. Managed local networks are fundamentally about enabling services to be formed or linked across boundaries…to ensure an optimal patient journey through and across services."

According to the 2007 Diabetes UK report *Making Every Young Person Matter*, these managed local networks differ from other partnerships as they need to have clear governance and accountability. This report states the preferred option to provide optimal support for children with diabetes is a combination of provision of care through local diabetes services with regional networks providing oversight, direction, support and combined use of resources. This follows examples provided by paediatric oncology, neonatology and cystic fibrosis, endorsed by the Royal College of Paediatrics and Child Health. The report further states that local diabetes services would provide:

- Access to a CYPSD team with appropriate training and competences; likely to include doctors, nurses, dieticians, as well as school and social support,
- Links to local diabetes networks, children's networks, children's services departments etc and primary care and adult diabetes services
- Routine care including diagnosis, initial management, continuing care and annual assessment;
- Access to psychological support and local counselling;
- Support for data entry, register and audit, reporting appropriately in terms of quality assurance and performance monitoring arrangements, and participating in the National Diabetes Audit
- Responses to audit recommendations and other data including patient feedback to improve services
- Agreement of explicit responsibilities with the regional network and with primary care teams
- Assurance that, as pump therapy becomes more common, local services have the appropriate skills and competences

While the regional network fulfils the following specific functions:

- Support and training function for local services
- A forum for review of case load, outcome measures and overall performance of services
- Specific support for services, such as addressing local difficulties with intensive treatment, substance use and/or specialist psychological leadership;
- An educational forum for sharing good clinical practice, crisis limitation and managed clinical care

- Robust information on numbers of children and the incidence, data regarding clinic attendance, HbA1c targets and surveillance of complications/related conditions to inform further development of NSF guidelines

In order to facilitate these activities, commissioners would need to commission jointly an appropriate network infrastructure, which might include:

- A network co-ordinator
- A network data manager and data entry facilities
- Regional network support services

This model of having local services with regional support is the cornerstone of the recommendations for diabetes care for CYP.

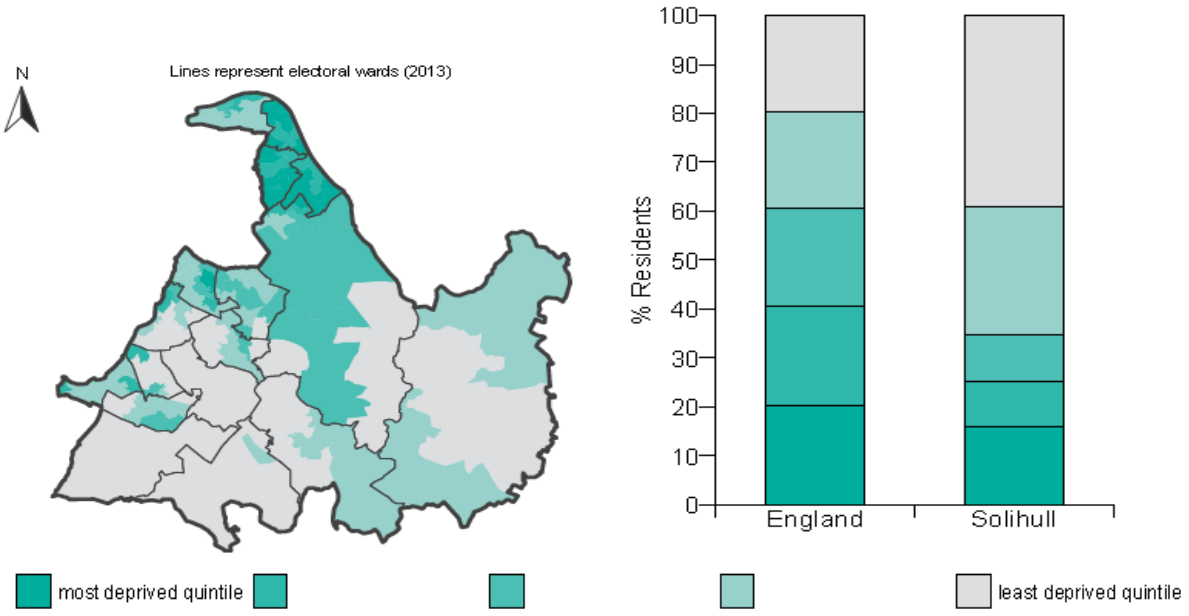
3. Overview of Solihull Population

Solihull is a broadly affluent borough in both the regional and national context, characterised by above-average levels of income and home ownership and a high proportion of residents (50%) classified as belonging to the Prosperous Suburbs socio-demographic classification. Levels and extent of deprivation are limited with only 22 of the borough's 133 Lower Super Output Areas (LSOAs) in the most 20% deprived areas in the country and just two in the bottom 5%.

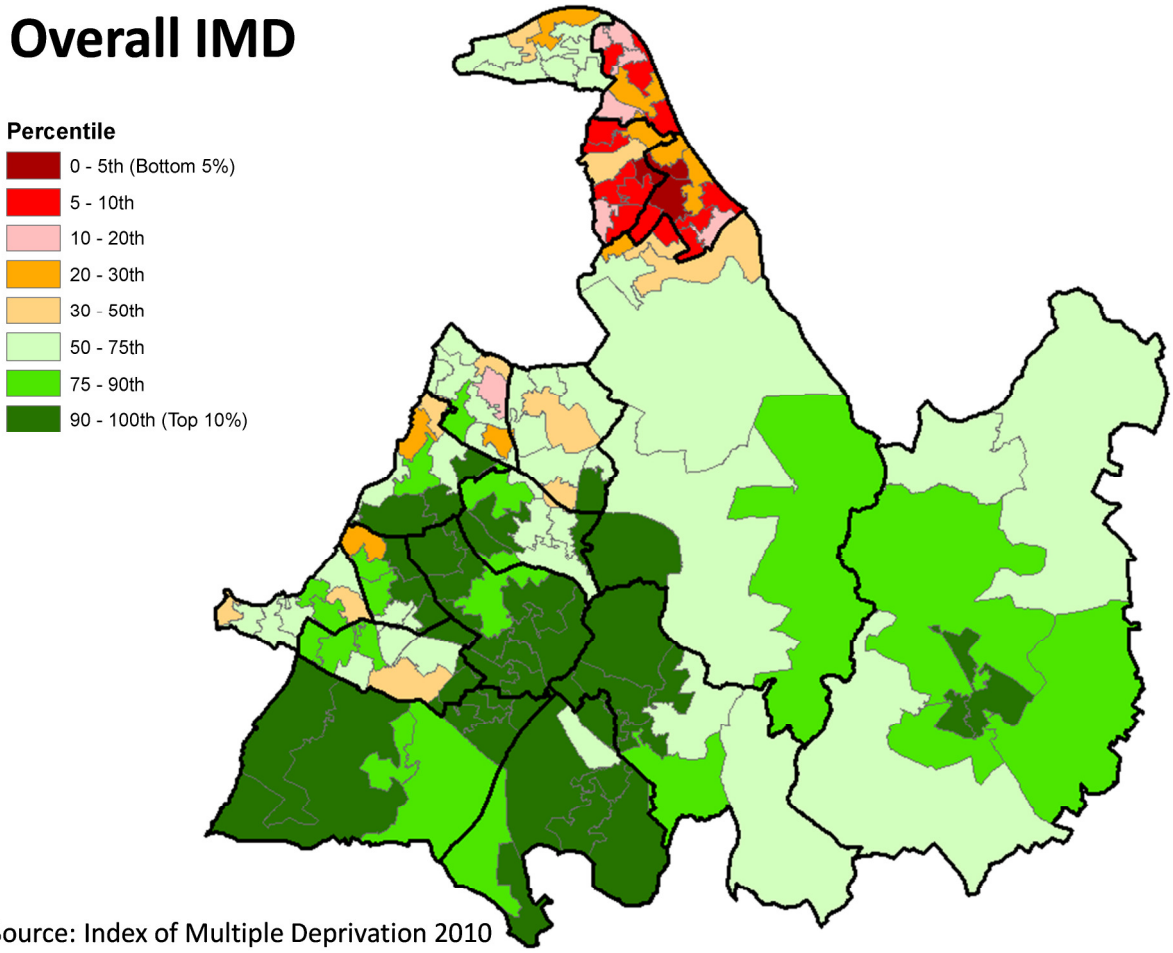
Lying at the heart of the West Midlands motorway network, with excellent public transport connections with the Birmingham city conurbation and linked to European and global markets by Birmingham International Airport, Solihull has significant geographic and infrastructure advantages. Economically, this supports a strong service sector economy with Solihull town centre and key regional strategic assets (the NEC complex, Land Rover and the Birmingham & Blythe Valley Business Parks) primarily responsible for drawing in around 85,000 workers to the borough on a daily basis.

Solihull as an authority is, however, challenged by a prosperity gap, with performance indicators in the Regeneration area, framed by the wards of Chelmsley Wood, Kingshurst & Fordbridge and Smith's Wood to north of Birmingham International Airport, significantly lagging the rest of the borough. Alongside below average income levels the regeneration area is notable for a relatively higher population density, less green space per head and a substantially greater proportion of socially rented housing (62% of the borough's total). The regeneration area contains the 20 most deprived LSOA neighbourhoods in Solihull, with 24 of the areas 29 LSOAs in the bottom 25% nationally. The impacts of this are felt across a broad range of outcomes including educational attainment, employment, crime and health. Outside of the regeneration area, clusters of relatively less advantaged households also exist in the Hobs Moat Road area (Lyndon and Elmdon wards) and to a lesser extent in Shirley, Castle Bromwich and Olton.

Figures 1-3: Tables and graphs showing geographical and demographic deprivation profile in Solihull

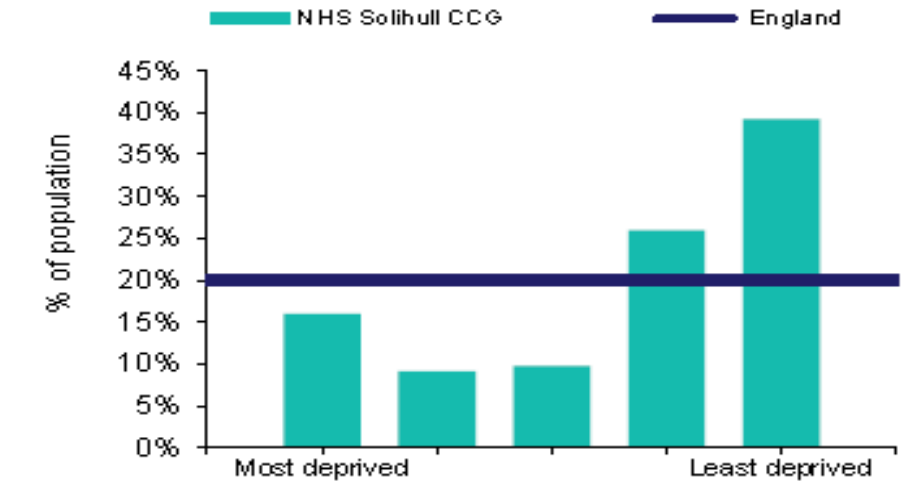


Overall IMD



Source: Index of Multiple Deprivation 2010

Deprivation

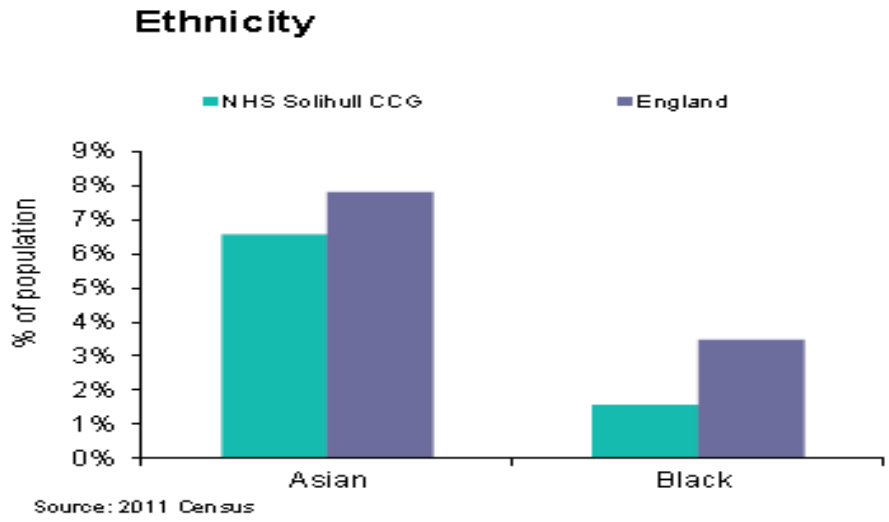


Source: IMD2010 and 2012 Mid-year population estimates

Ethnicity

Solihull is in the midst of dynamic and rapid socio-demographic change. The Black and Asian Minority Ethnic (BAME) population has more than doubled since the 2001 Census and now represents nearly 11% of the total population. On this basis the borough is less diverse than England as a whole (and significantly less so than neighbouring Birmingham), but with BAME groups representing a relatively higher proportion of young people in Solihull (over 15% of those aged 15 and under) this representation is set to increase.

Figure 5: Graph of BAME demographics in Solihull



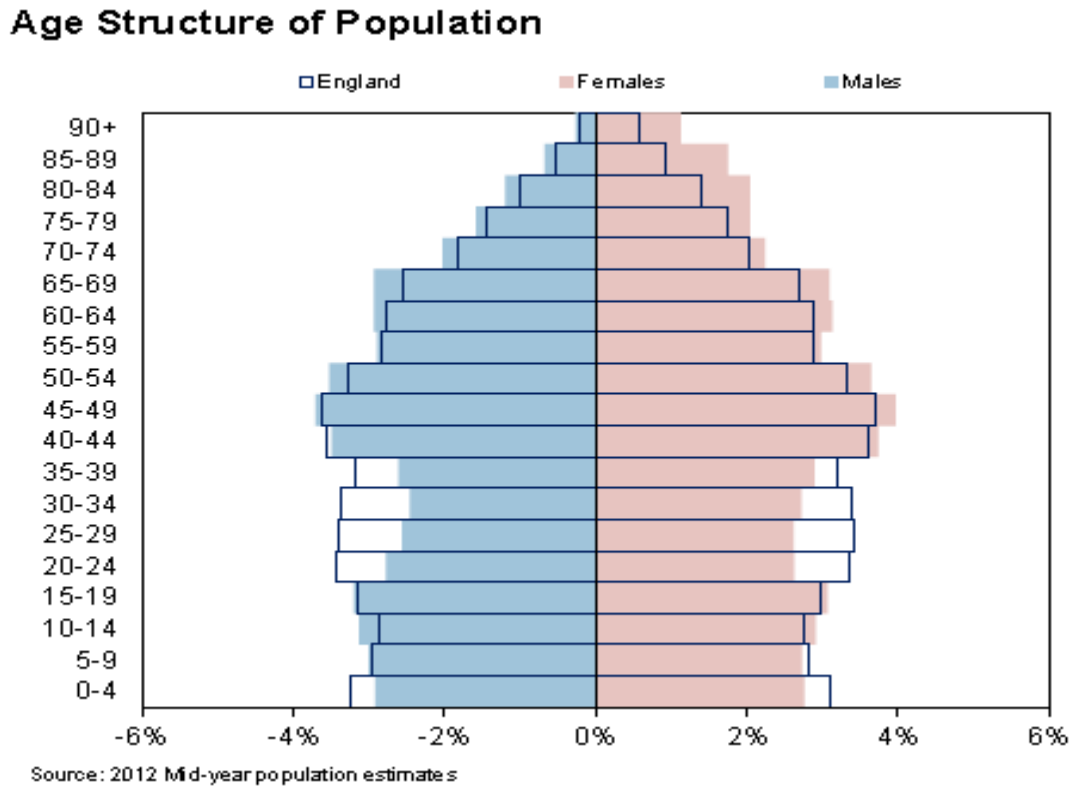
The second significant demographic change is Solihull's ageing population. Since 1981 the proportion of residents aged 65 and over has increased from 11% to 19% and there are now 12,700 more residents aged 65 to 84 years and 4,100 more aged 85 years and over. Population projections based on the 2012 population estimates indicate the relative ageing of the Solihull population will continue and by 2022 an estimated 48,700 people aged 65 and over will live in the borough (22%), with those aged 85+ numbering 8,300 (4%). This ageing population, represents a significant and growing challenge in terms of health and social care.

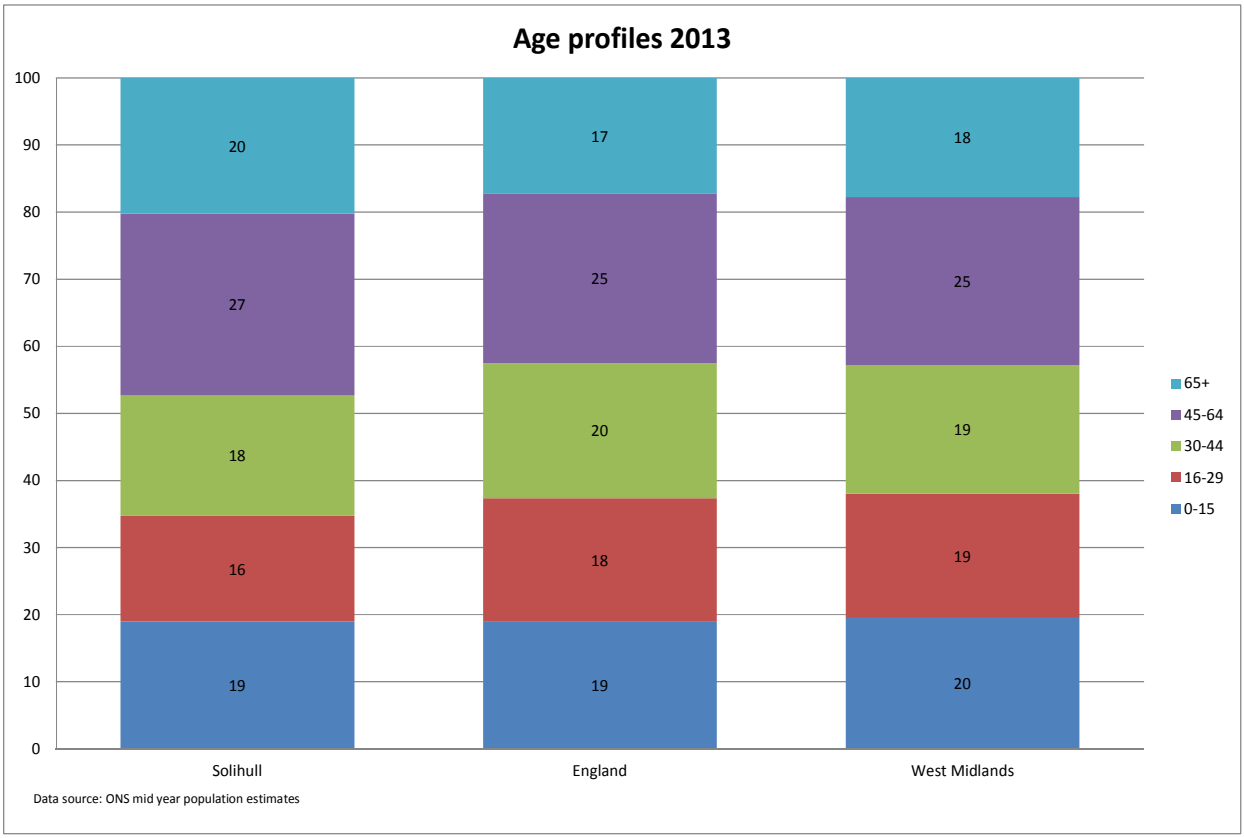
Age profile

At this point the ONS estimates that the Solihull population was 208,900 (101,400 males, 107,500 females) an increase of 2,226 persons on the 2011 figure (+1.1%).

The most notable feature of the Solihull population profile is the relatively higher proportion of older people in the borough, with 19.1% of the population aged 65 and over compared with 16.3% in England and 16.9% in the West Midlands. Solihull also has an above average representation of people approaching retirement age (19.5% aged 50 to 64 compared with 18.1% nationally). The working age population (age 16-64) is approximately 128,100 or 62% of the total population. This is below both the England (65%) and West Midlands (64%) averages. The number of children and young people (aged 19 and below) in Solihull is, at 24.1%, in-line with the England average, although it is notable the borough has a relatively low proportion of pre-school age children; those aged 0-4 years represent 23% of all children in Solihull compared to 26% nationally.

Figure 6 and 7: Age structure of Solihull population





What this means for diabetes care in Solihull

The strong links between diabetes prevalence and both deprivation and ethnicity, means that it is important to consider these factors when designing the diabetes pathway to ensure that services can target those most in need, particularly as the Asian population of Solihull increases.

Age is a key factor in diabetes prevalence. Type 1 diabetes tends to be diagnosed in childhood but the prevalence of Type 2 diabetes increases steadily after the age of 40 years. Diabetes prevalence is higher in areas experiencing deprivation. People living in the 20% most deprived neighbourhoods in England are 56% more likely to have diabetes than those living in the least deprived areas. It is known that people from Asian and Black ethnic groups are more likely to have diabetes and tend to develop the condition at younger ages.

Between 2010 and 2030 the prevalence of diabetes among people aged 16 years and older is estimated to increase to 4,603,363 or 9.5%. Approximately half of this increase is due to the changing age and ethnic group structure of the population and about half is due to the projected increase in obesity.

3.1 Solihull Clinical Commissioning Group Population and Profile

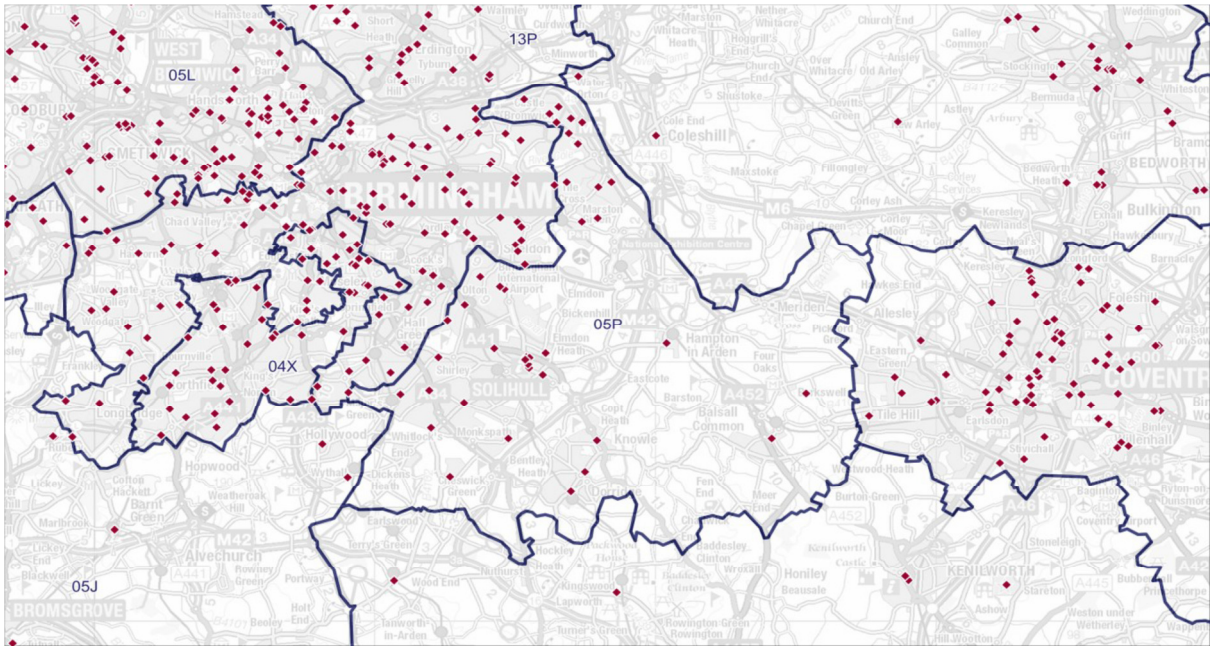
Solihull CCG contains 32 GP practices with a total registered list size population of around 239,000 as of 2013/2104 Quality Outcomes Framework data. This CCG GP registered population is greater than the resident population of Solihull because of the distinction between local authority and CCG boundaries which means that two GP practices within the Birmingham/Solihull border which come under the Birmingham LA area, do in fact come under Solihull CCG.

The CCG Classification Groups provide a grouping of CCGs that have similar characteristics to allow appropriate benchmarking. It uses the following data to assign CCGs to the best match CCG Classification Group

- Age structure of the population
- Percentage of population from Asian ethnic groups
- Percentage of population from Black ethnic groups
- Indices of Deprivation 2010 (average score)
- Population density

Solihull CCG is in the Purple group. The purple group has an older population living in rural areas and low deprivation levels

Figure 8: Location of the 32 GP practices in Solihull



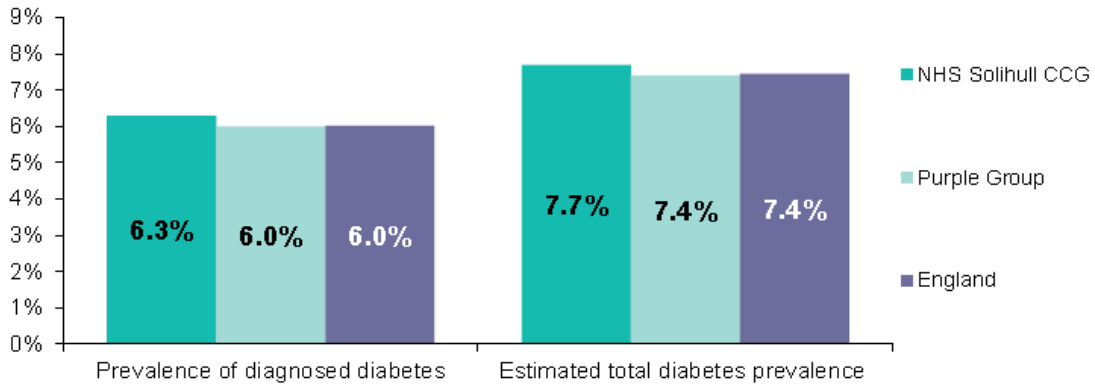
4. Prevalence of Diabetes

Prevalence is the number of people in a given population with a particular condition at a given point in time. The diagnosed prevalence of diabetes is calculated from the returns submitted to the Health and Social Care Information Centre (HSCIC) as part of the Quality and Outcomes Framework (QOF) by each GP practice. Diagnosed prevalence is the number of patients aged over 17 years who are on the practice's diabetes register on the 31 March in a given financial year. Practice returns are combined to calculate a prevalence rate for the local CCG. The estimated prevalence of diabetes is taken from the Diabetes Prevalence Model (DPM). This uses data from the Health Survey for England to estimate the total (diagnosed and undiagnosed) prevalence adjusted for age, sex, ethnic group and deprivation. It reflects both the diagnosed and a calculated estimate of the undiagnosed cases of diabetes which provide an estimated total prevalence of diabetes in adults.

4.1 Diagnosed and undiagnosed prevalence

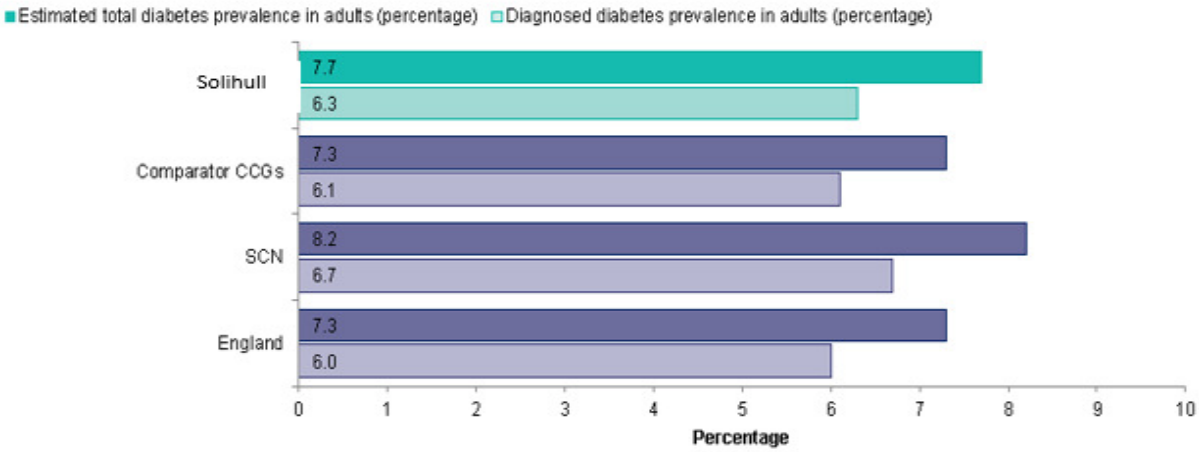
In 2012/13 there were 12,053 people aged 17 years and older diagnosed with diabetes in NHS Solihull CCG, giving a prevalence of 6.3%. It is estimated that there are a further 2,666 adults with undiagnosed diabetes. The chart below compares the prevalence of diagnosed and undiagnosed diabetes in NHS Solihull CCG with the cluster group and England as a whole.

Figure 9: Difference between diagnosed prevalence and expected for Solihull and comparators



Source: Quality and Outcomes Framework, 2012/13 and Diabetes Prevalence Model 2012

Prevalence of diabetes estimated 2012 and diagnosed 2012/13 (percentage)



Age is a key factor in diabetes prevalence. Type 1 diabetes tends to be diagnosed in childhood but the prevalence of Type 2 diabetes increases steadily after the age of 40 years. Diabetes prevalence is higher in areas experiencing deprivation. People living in the 20% most deprived neighbourhoods in England are 56% more likely to have diabetes than those living in the least deprived areas. It is known that people from Asian and Black ethnic groups are more likely to have diabetes and tend to develop the condition at younger ages.

Figure 10: Age and gender of patients with Type 1 diabetes within Solihull CCG

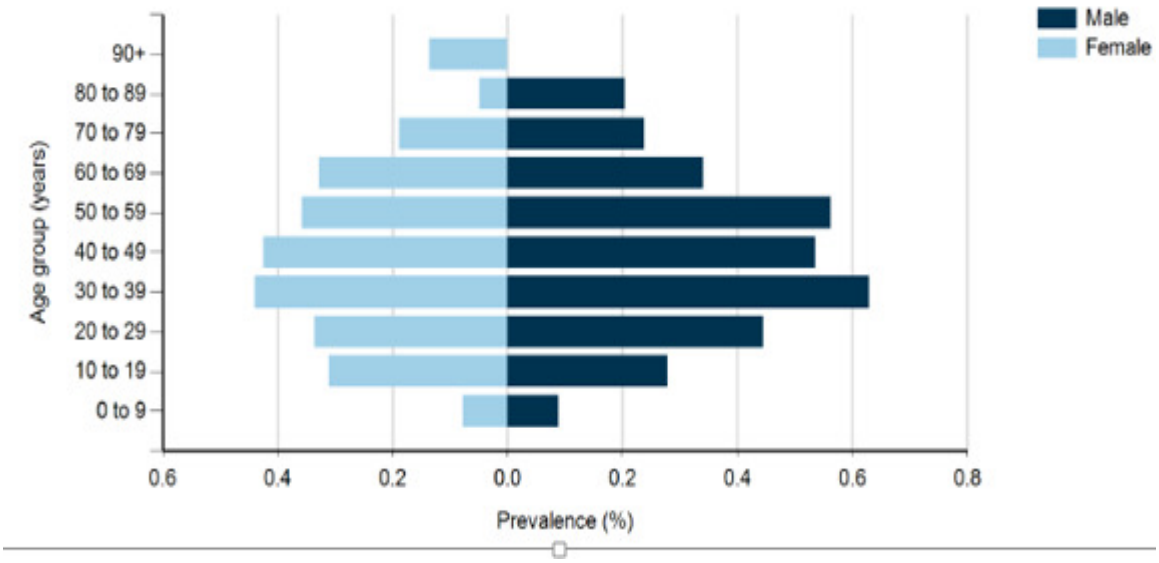


Figure 11: Age and gender of patients with Type 2 diabetes within Solihull CCG

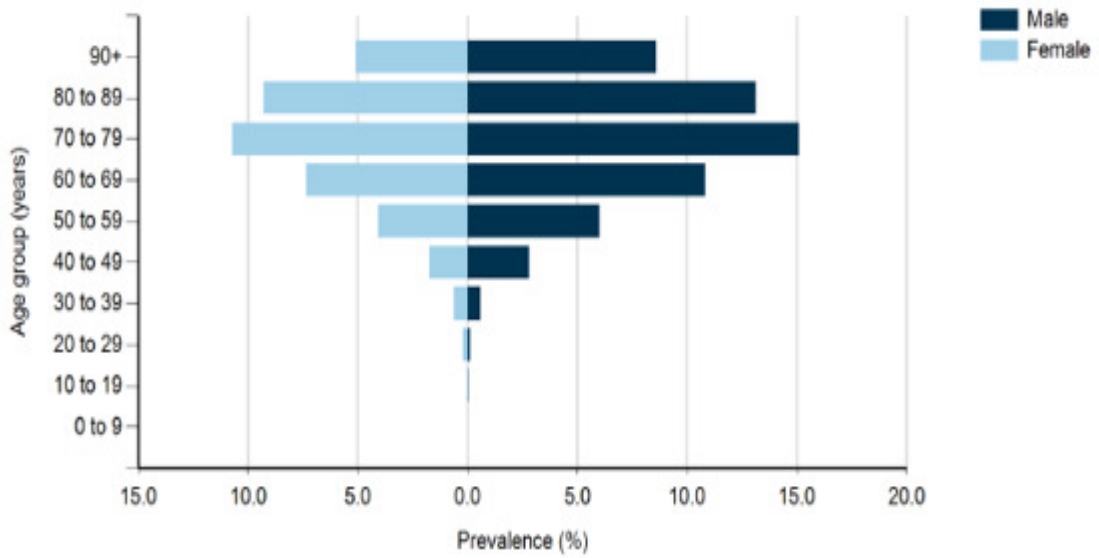


Figure 12: Proportion of patients aged over 65 in Solihull by GP practice list

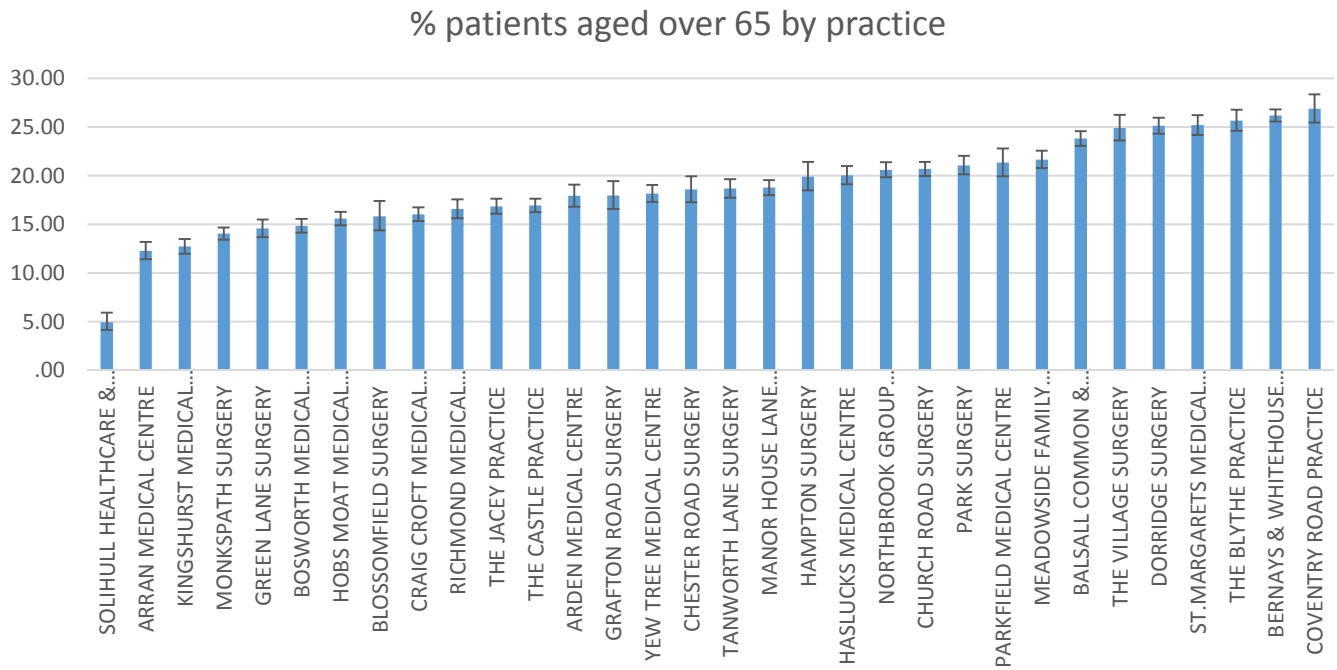
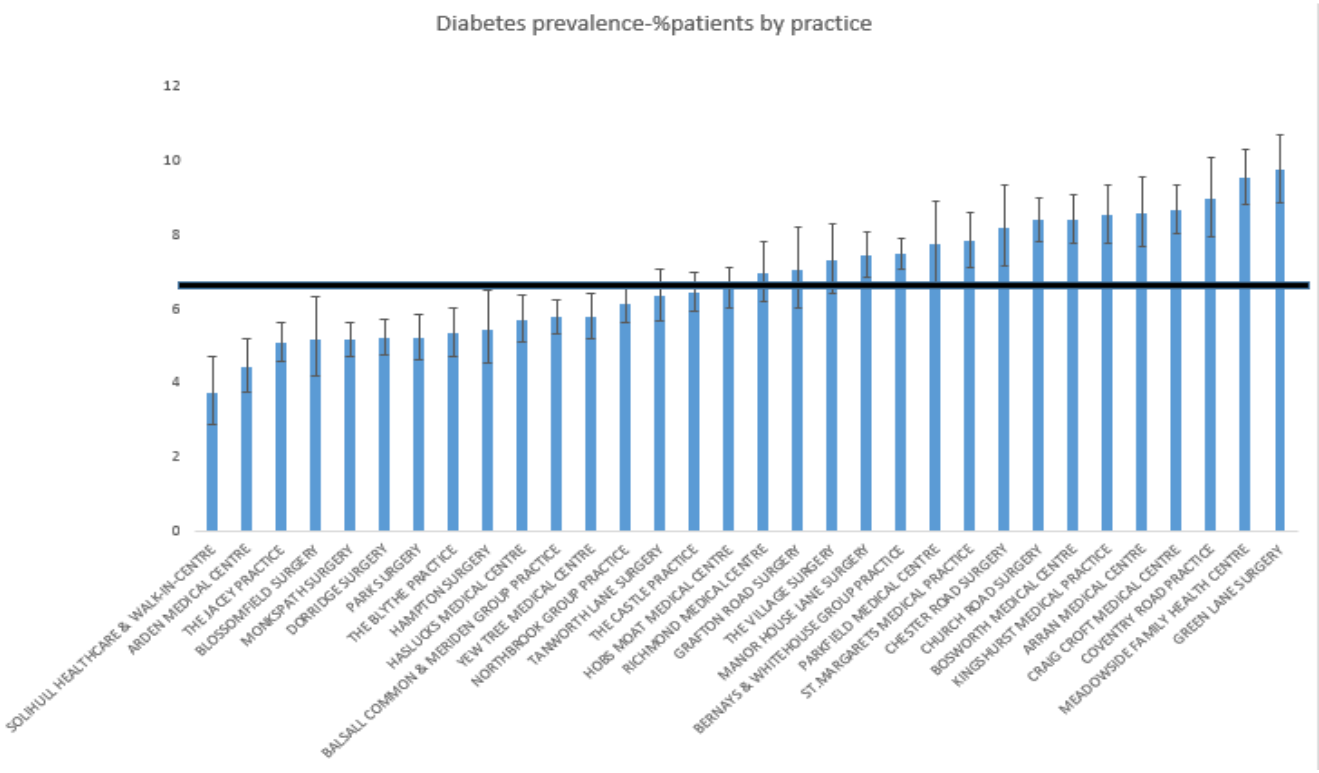


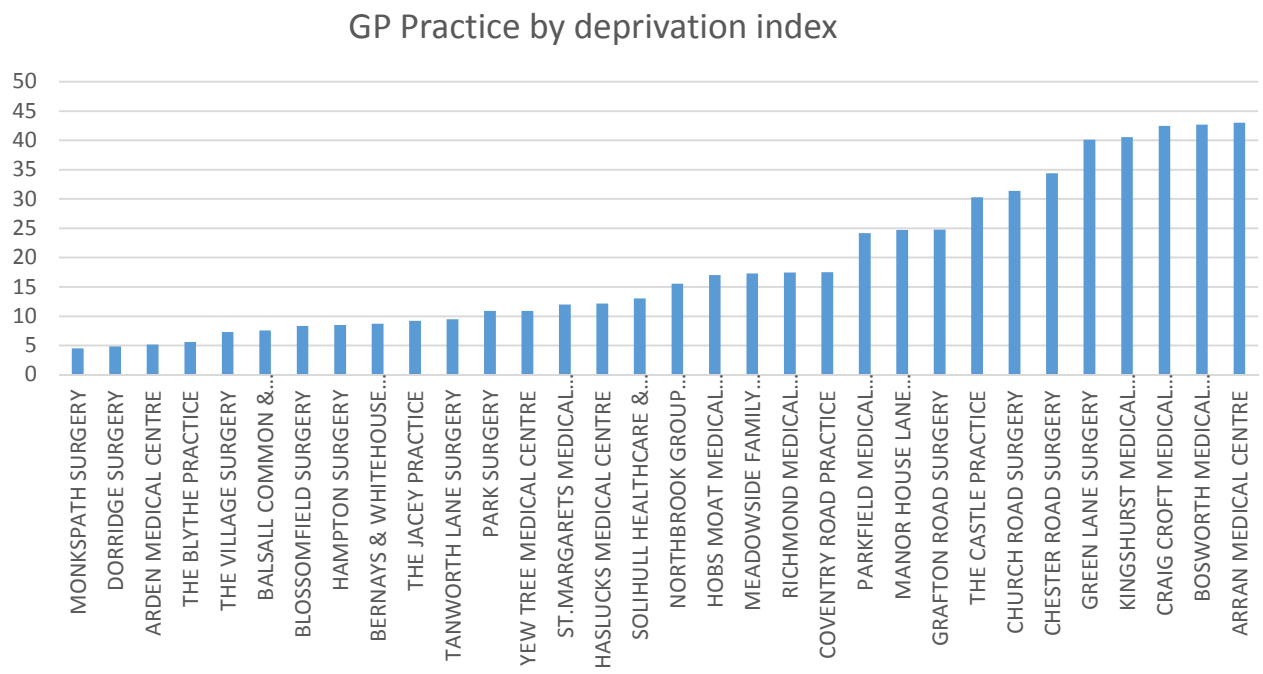
Figure 13: Diabetes prevalence by GP practice in Solihull:



In NHS Solihull CCG the prevalence of diabetes varied between the 32 practices from 3.1% to 10.2%. The diagnosed prevalence rate for diabetes in NHS Solihull CCG was 6.3%

The confidence intervals around the diabetes prevalence for each GP practice in Solihull shown above indicates that the 12 lowest prevalence practices have significantly lower levels of patients diagnosed than the Solihull average. The 13 practices with the highest prevalence show significantly higher levels than the Solihull average. The reasons for this variation in prevalence needs to be investigated further to take into account factors such as age, ethnicity and deprivation profiles

Figure 14: Graph of GP practices in Solihull ranked by deprivation index (higher value=most deprived)



Further analysis is required to look practice prevalence and explore potential issues in the variation of practices diagnosing diabetes and also to look at the impact of the increased risk factors in areas of Solihull that have higher rates of deprivation and ethnically diverse populations.

4.2 Impaired Glucose Regulation

Nationally, the prevalence of Impaired Glucose Regulation (IGR) often called pre-diabetes has increased from 11.6 per cent to 35.3 per cent of the adult population between 2003 and 2011[16], for people who are overweight and over the age of 40, the figures are even higher, at 50.6 per cent. People of South Asian origin and people in the second highest quintile of social deprivation are at greater risk of pre-diabetes, as are those with raised blood pressure. The latest figures for Solihull practices show that nearly 7,000 people have had a health check and of these, around 15% per cent had pre-diabetes, indicated by HbA1c between 42 and 47 mmol/mol[17].

4.3 Projected prevalence

It is important to being able to estimate current prevalence and understanding why there might be differences between diagnosed and true prevalence of diabetes. However it is also important to

[16] BMJ Open (2014)
[17] MSDi, (2014)

examine projected prevalence, as this will inform how services may need to evolve in order to meet the changing needs of a population. The table below shows the projected numbers of patients with diabetes over the next decade. The numbers are estimated based on age, sex, ethnic breakdown and deprivation. They assume that obesity will continue to increase at the current rate. In Solihull the number of people with diabetes is projected to rise by 24 per cent between 2012 and 2025. How this may affect diabetes services needs to be considered.

Table 1: Projected prevalence of diagnosed and undiagnosed diabetes 2012 to 2025 (ages 16+)

Area		2012	2015	2020	2025
England	Number	3,141,662	3,348,320	3,745,210	4,068,458
	Prevalence	7.3%	7.6%	8.2%	8.6%
Solihull	Number	12,688	13,378	14,442	15,624
	Prevalence	7.5%	7.8%	8.3%	8.7%

Gaps

Further information is required to understand prevalence amongst some groups of the population or to provide greater understanding across the general population. Particularly gaps include but are not limited to;

- Children and young people
- People with a learning disability
- Number of people with mental illness with diabetes
- Gestational diabetes
- Other vulnerable groups e.g. homeless

Recommendations	
1.	Investigate the gap between undiagnosed diabetes and estimated prevalence to look for causes and unmet needs
2.	We should consider taking action to address the gaps in data to understand prevalence across the population and particularly at risk groups to inform future commissioning, prevention strategies and unmet needs
3.	We should consider reviewing its existing commissioning arrangements to develop a model of care for diabetes for Solihull that will meet quality standards, that are patient focused and that will be cost effective to meet the needs of the population with demand on services set to increase

5. Prevalence of risk factors

5.1. Diabetes

Risk factors for prevalence of Type 2 diabetes include but are not limited to;

- Increasing age
- High BMI
- Large waist circumference
- Lifestyle factors including unhealthy diet, physical inactivity and smoking
- Ethnicity – those from Black, Asian and other minority ethnic groups are at higher risk
- Deprivation
- Close family member with diabetes
- High blood pressure or CVD
- Gestational diabetes or polycystic ovarian syndrome
- Mental illness
- Impaired glucose regulation (pre-diabetes)

5.2. Inactivity

Inactivity is key risk factors for pre-diabetes and Type 2 diabetes; the data below provides a brief snapshot of the issue of physical activity in Solihull.

In Solihull,2 8.6 per cent of people aged 16+ were classified as "inactive" compared to 28.9 per cent in England[18]. Inactive means doing less than 30 minutes of moderate physical activity per week. A recent study found that people with Type 2 recorded greater amounts of sedentary time compared with their non-diabetic counterparts[19].

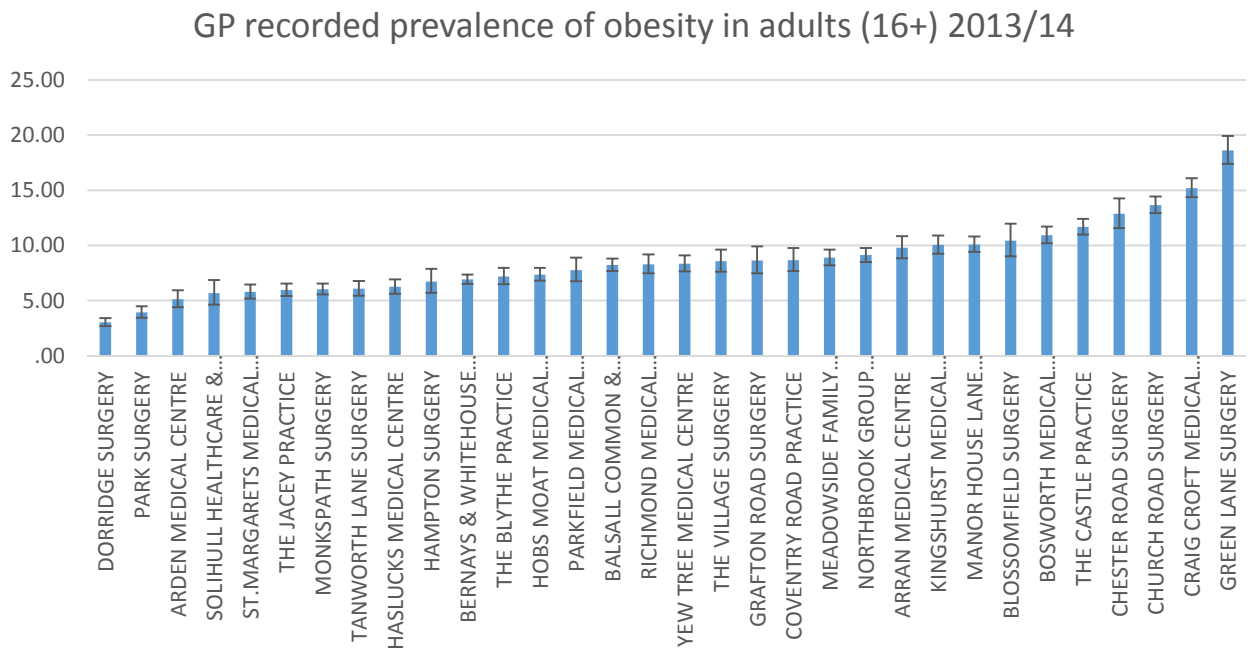
5.3. Obesity

There is a closely association between obesity and Type 2 diabetes. Public Health England state that the likelihood and severity of Type 2 diabetes are closely linked with body mass index (BMI). There is a seven times greater risk of diabetes in obese people compared to those of a healthy weight, with a threefold increase in risk for overweight people[20]. Prevalence of obesity and diabetes is increasing in England with an estimated 62 per cent of adults being overweight or obese. Therefore a joint approach between CCGs and Public health is essential to analysis this association

The rate of adult obesity rose from 1991 from 15 per cent to 25 per cent in 2012[21]. The rate of adults who are overweight or obese in Solihull is 63.8%, the same as the national figure.

Every year as part of the National Child Measurement Programme (NCMP) children in reception and year 6 are weighed and measured to access overweight children and obesity levels in primary schools. This programme provides a range of data that can be used to inform public health initiatives and service planning.

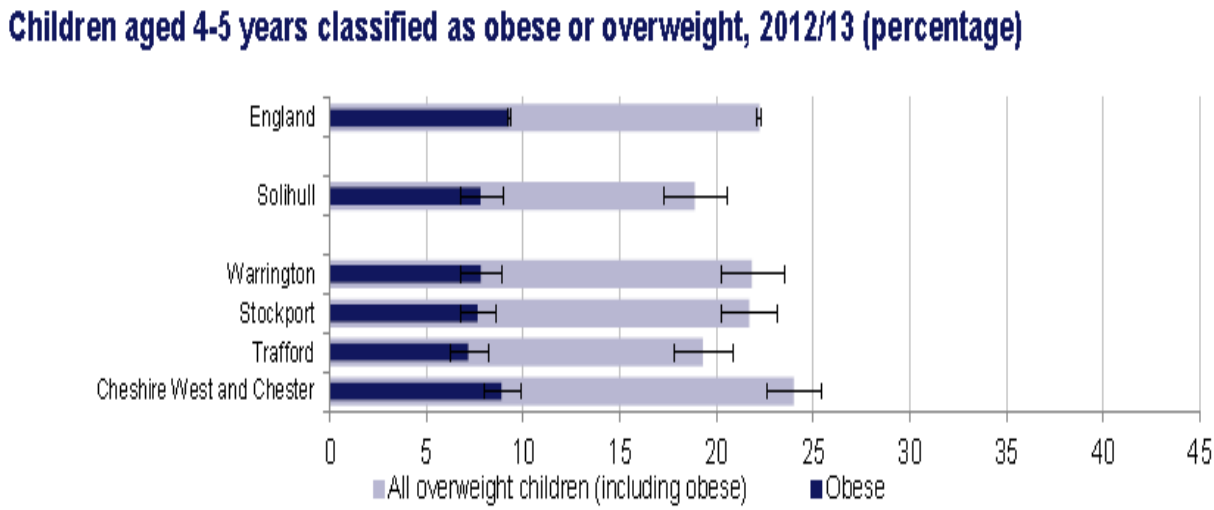
[18] Sports England (2013) Active People Survey
[19] Public Health England (2014) Adult Obesity and Type 2 Diabetes
[20] Public Health England (2014) Adult Obesity and Type 2 Diabetes
[21] Public Health England (2014) Adult Weight Data Factsheet

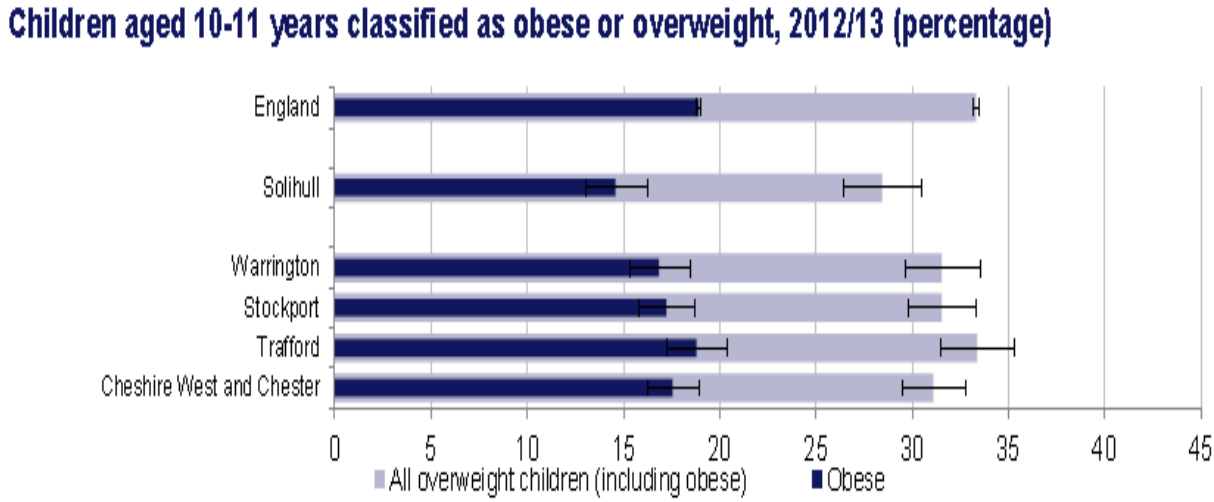


5.4. Childhood obesity in Solihull

The rate of child obesity had dramatically risen in England from 10% of 2-20 year olds in 1995, to around 13% in 2011/2012. Since raising obesity levels are strongly linked to rising diabetes, it is important to invest in evidence-based programmes in order to tackle the rise in childhood obesity and prevent the future health and cost outcomes associated with rising diabetes prevalence in the future. At the moment, Solihull has lower rates of childhood obesity compared with the national average although efforts need to be made to sustain and improve on this where possible.

Figures 16: Proportion of children who are overweight or obese in Solihull compared with statistical neighbours and nationally





Note: This analysis uses the 85th and 95th centiles of the British 1990 growth reference (UK90) for BMI to classify children as overweight and obese.
I indicates 95% confidence interval. Data source: National Child Measurement Programme (NCMP), Health and Social Care Information Centre

	Local no.	Local value	Eng. ave.	Eng. worst		Eng. best
Obese children (4-5 years)	169	7.8	9.3	14.8		5.7
Obese children (10-11 years)	279	14.6	18.9	27.5		12.3

Indicator	Period	Solihull		Region	England	England		
		Count	Value	Value	Value	Worst	Range	Best
Reception: Prevalence of underweight	2013/14	27	1.14%	1.17%	0.95%	2.95%		0.28%
Reception: Prevalence of healthy weight	2013/14	1,847	77.7%	75.4%	76.5%	70.4%		81.6%
Reception: Prevalence of overweight (including obese)	2013/14	503	21.2%	23.5%	22.5%	29.5%		15.9%
Reception: Prevalence of obesity	2013/14	212	8.9%	10.5%	9.5%	14.4%		5.5%
Year 6: Prevalence of underweight	2013/14	31	1.43%	1.55%	1.36%	3.44%		0.50%
Year 6: Prevalence of healthy weight	2013/14	1,464	67.7%	62.7%	65.1%	55.0%		74.5%
Year 6: Prevalence of overweight (including obese)	2013/14	666	30.8%	35.8%	33.5%	43.8%		24.4%
Year 6: Prevalence of obesity	2013/14	347	16.1%	21.0%	19.1%	26.7%		11.1%

Solihull Public Health has prioritized action to tackle both adult and childhood obesity with its recently announced Food Strategy agenda and adult obesity hubs programme. In addition, school based healthy cooking and eating educational programmes are continuing to be invested in Solihull.

Public Health England (2014) data suggests risk factors for obesity and increasing prevalence are linked to;

- BMI higher than 30
- Gender – more women have higher BMIs than men
- Age – prevalence is higher in older age groups
- Women living in low income households
- Ethnicity - higher prevalence in Black African and possible underestimation in South Asian population

Public Health England has a specific section on their website where further information is available on obesity and the association with Type 2 diabetes.

Recommendations	
4.	We should consider agreeing as part of a Solihull diabetes prevention strategy an overall position statement on pre-diabetes, data collection e.g. pre-diabetes register, screening and review success of outcomes to prevent Type 2 diabetes within at risk group
5.	CCG should consider exploring alongside any service review into diabetes how it can build links with Public Health Solihull ongoing obesity initiatives to jointly address the strong link between obesity and diabetes
6.	A Solihull diabetes prevention strategy should look at making the appropriate links to obesity to target interventions at those at risk group and to improve management of diagnosed diabetes in primary care amongst those that are obese or overweight to prevent avoidable complications e.g. amputations

6. Local health burden from diabetes

Figure 14 illustrates the number of Solihull residents who were admitted to hospital because of their diabetes between 2011 and 2014, by age group. The spike in young people in their late teens represents the large number of cases of Type 1 diabetes which are diagnosed in this age category. Diagnosis often follows emergency hospital admission for symptoms of previously undiagnosed diabetes. The spike among 45-49 year olds is a combination of co-morbidities resulting from unsatisfactory management of diagnosed diabetes and symptoms of previously undiagnosed diabetes. While most people with diabetes are diagnosed in their late forties, markers for pre-diabetes are present up to ten years before this.

Comparison with national admissions data and data from our statistical neighbours should be used to understand if Solihull's non-elective diabetes admissions are higher than expected. However, regardless of the outcome of this comparison, it is important that these data continue to be monitored as non-elective admissions represent a significant proportion of the overall spend on diabetes.

Figure 17: Non-elective admissions for diabetes where disease was primary cause 2011-14 (Solihull residents) by age

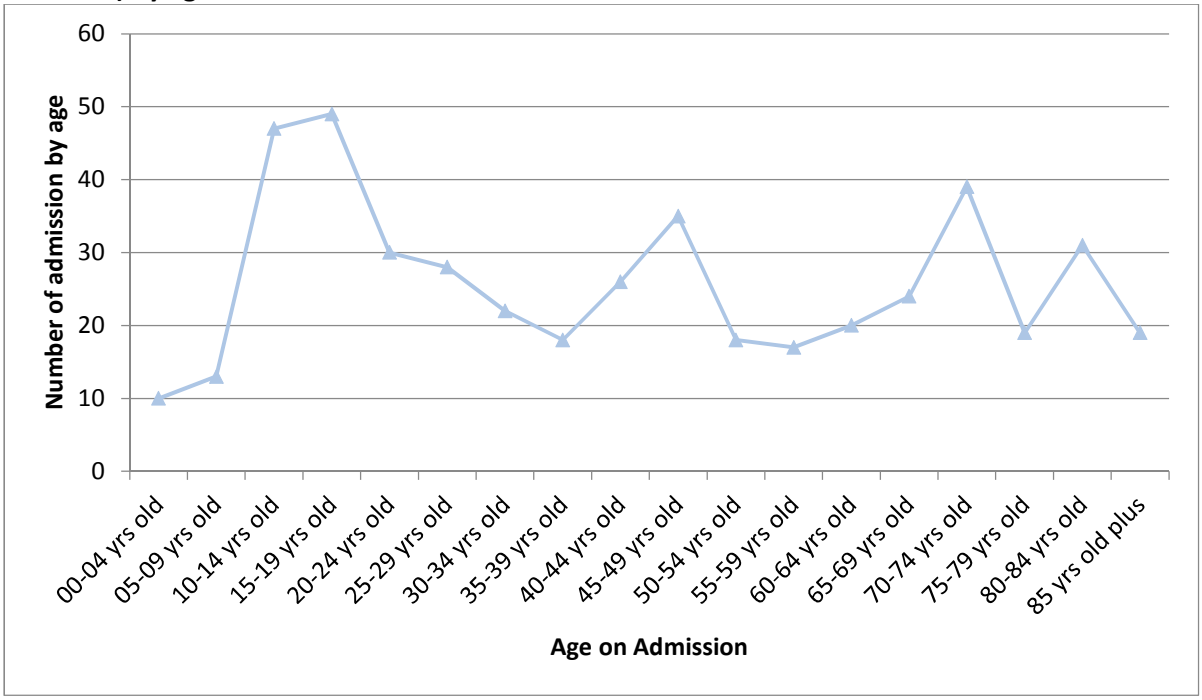
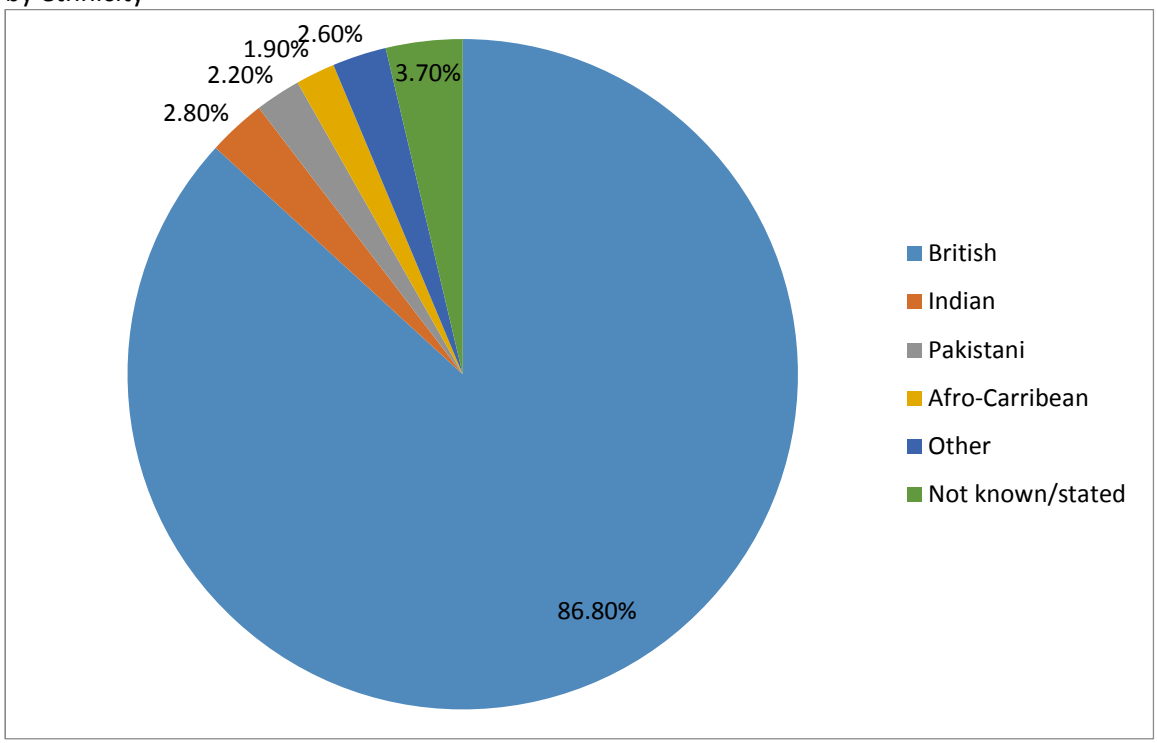


Figure 18illustrates ethnic breakdown of those living in Solihull who had an unplanned admission because of diabetes. It is not possible to tell from this chart if this simply represents the background ethnic make-up of the CCG population or whether some ethnicities are over-represented. It is difficult to estimate population ethnic breakdown at CCG level and therefore we have looked at admissions by ethnicity for Solihull and the population ethnic breakdown for the borough. Comparing pie charts shows that for Black and Asian groups the population ethnic breakdown does not seem to reflect diabetes admissions. The rate of admissions for Asians is considerably lower than the rate in the population. This may seem surprising as Asian origin is a risk factor for developing diabetes. However the age profile of the Asian community is younger than the overall population and therefore this would result in fewer diabetes-related admissions.

Figure 18: Admissions for diabetes where disease was the primary cause 2011-14 (Solihull residents) by ethnicity



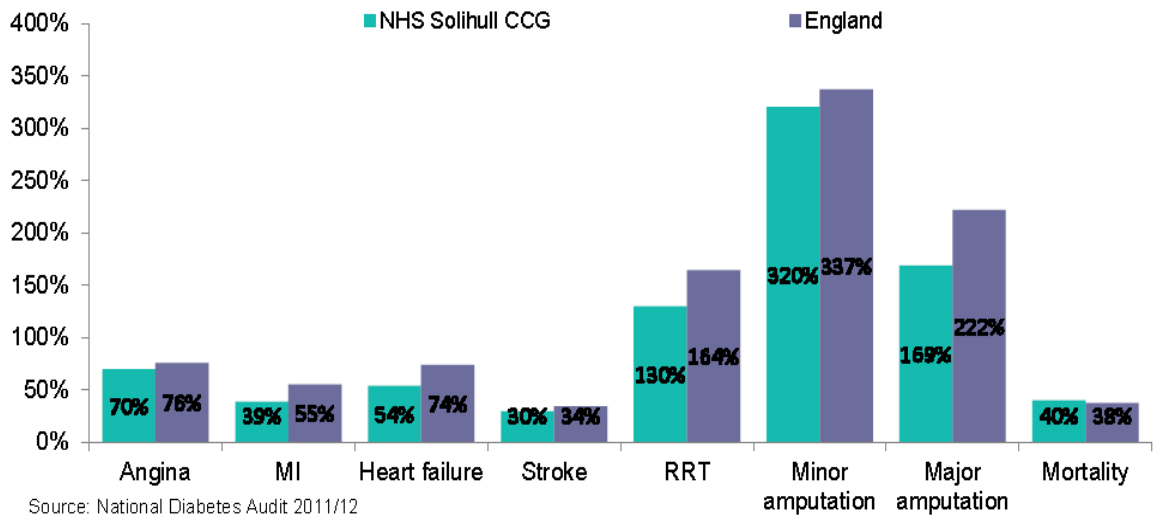
6.1. Average length of hospital stay per admission

Length of stay may be used as a proxy measure for the seriousness of illness on admission. However it may also be linked to individual care trusts' care pathways and reflect the availability of community-based care. Table x shows differences between the average length of stay for patients admitted because of diabetes between some of the local hospital provider trusts. It is important to do some further work to determine if these differences reflect truly more serious admissions or worse patient outcomes or are simple a reflection of differences in care pathways. If the latter is the case, comparing different approaches between hospitals is recommended.

6.2. Prevalence of complications

Compared to the general population, people with diabetes in Solihull CCG were 38.8% more likely to have a myocardial infarction and 29.9% more likely to have a stroke. They were also 53.9% more likely to have a hospital admission where heart failure was recorded. In Solihull CCG, people with diabetes have a 40% greater chance of dying in a one year period than the general population. However, for all complications associated with diabetes with the exception of overall risk of mortality, Solihull residents have fewer complications than the national level of risk.

Figure 19: Percentage of additional risk of diabetes-related complications for people with diabetes in Solihull compared to national figure



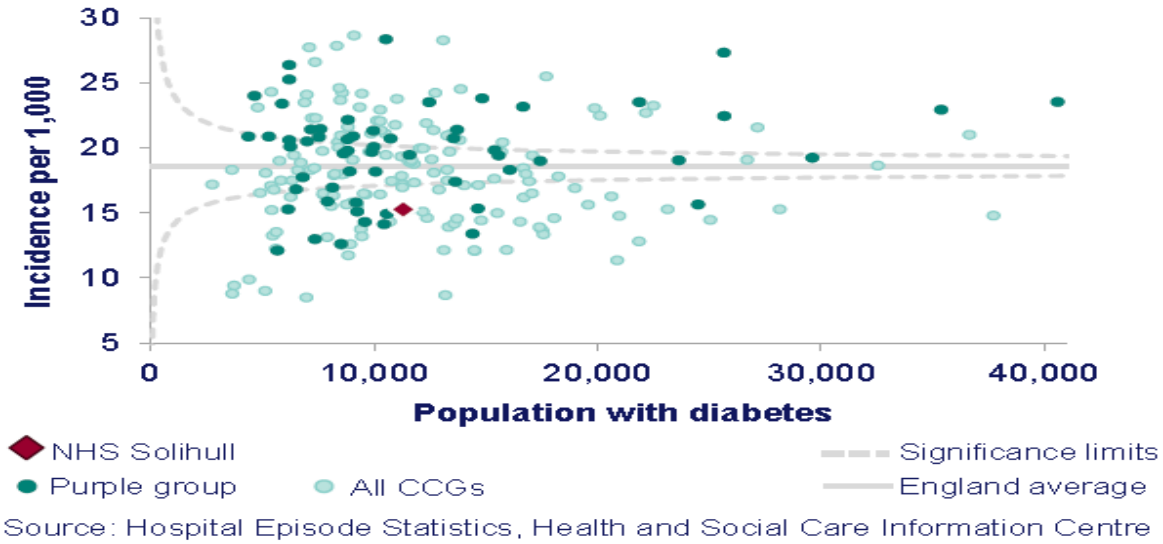
6.3. Diabetes foot care in Solihull

There have been 518 episodes of care for diabetic foot disease between 2010/11 and 2012/13, accounting for 2,799 nights in hospital. The annual rate of episodes of care for diabetic foot conditions per 1,000 adults with diabetes is significantly lower than the national average. There were 16 major amputations performed during the three years, giving an annual rate of 0.5 major amputations per 1,000 adults with diabetes, which is significantly lower than the national average.212 different patients were admitted for foot disease. 62.7% of these had more than one episode of care in the three years, which is significantly higher than the national average. Of the 212 patients, 17.0% had more than four periods of care, which is not significantly different from the national average.

The funnel plot below shows the variation in the annual rate of episodes of care for diabetic foot disease across CCGs in England. A CCG shown outside the dotted lines ('funnel') can be said to show significant variation from the national average. If a CCG is significantly different, it is important this evidence is viewed in conjunction with the information on the average length of stay to understand the impact of the significantly different episode rate.

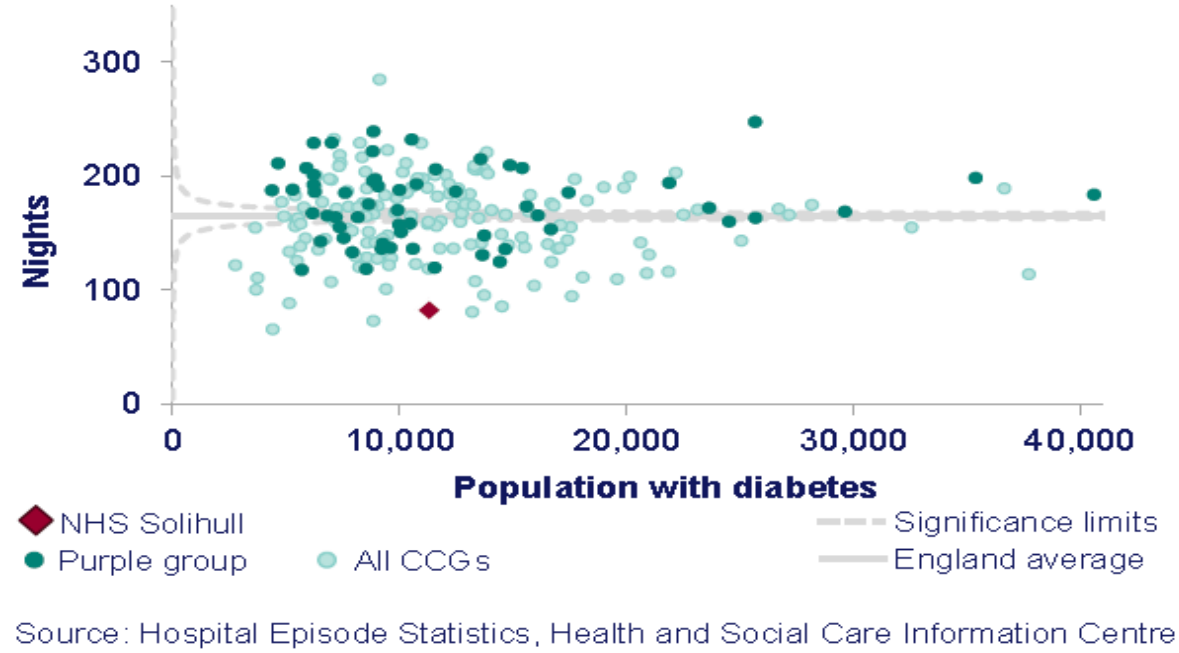
The CCGs represented by the darker dots in the charts are CCGs with similar characteristics to NHS Solihull CCG.

Figure 20: Funnel plot showing episodes of care for diabetic foot disease



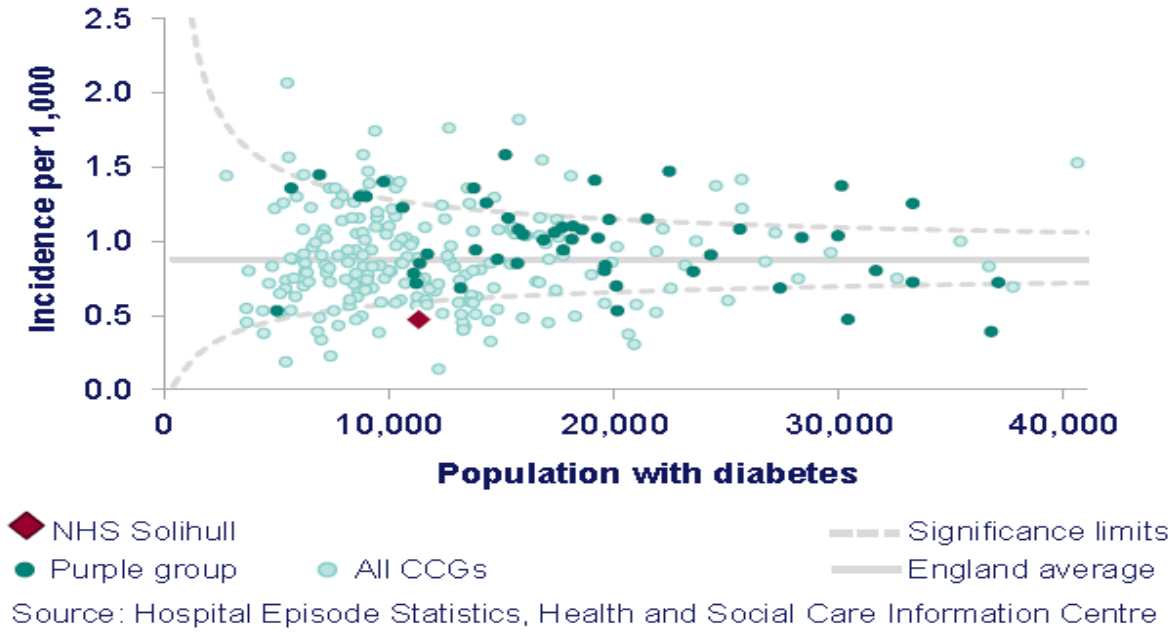
In NHS Solihull CCG there were 518 episodes of care for diabetic foot disease between 2010/11 and 2012/13, which is equivalent to 15.3 per 1,000 people with diabetes each year. This is lower than the national rate of 18.6 per 1,000. This care accounted for 2,799 nights as an inpatient.

Figure 21: Episode of hospital admissions for diabetic foot disease in Solihull resulting in overnight stay



The funnel plot above shows the variation in the number of nights spent in hospital for diabetic foot disease per 1,000 people with diabetes. In NHS Solihull CCG the number of nights spent in hospital was 82.4 nights per 1,000, which is below the national average of 165.1 nights per 1,000.

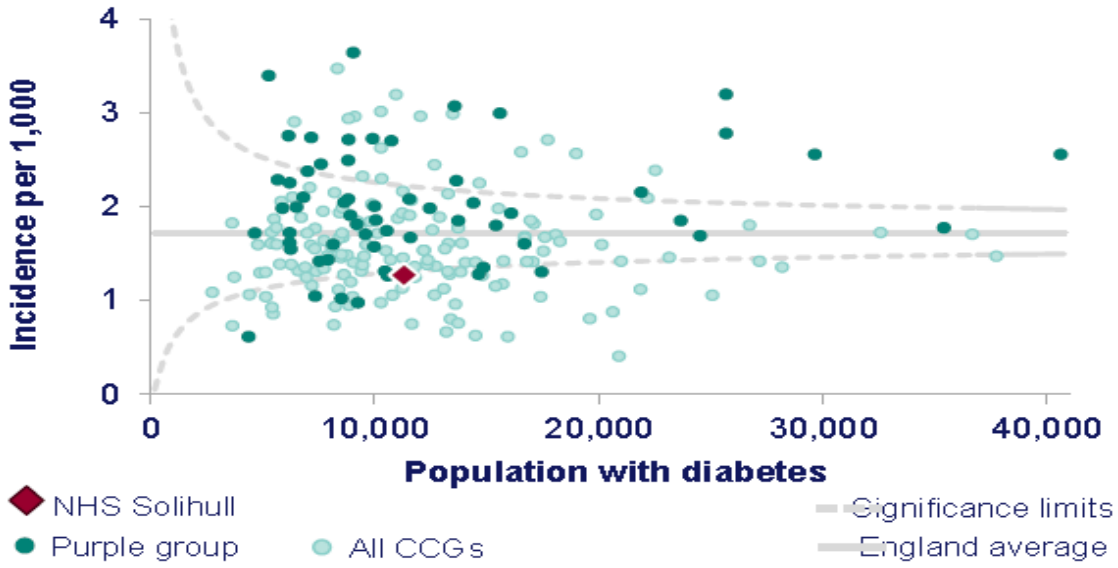
Figure 22: Funnel plot showing incidence of diabetes-related major amputations for Solihull



In NHS Solihull CCG there were 59 episodes of care where an amputation occurred in patients who were recorded as having diabetes. Of these, 16 were major amputations (above the ankle). This is equivalent to 0.5 major amputations annually per 1,000 people with diabetes and is significantly below the national average of 0.9 per 1,000. These major amputations resulted in 302 nights in hospital during the three years.

The incidence of major amputations is currently below the national average in NHS Solihull CCG but this does not necessarily mean that improvements in the provision of care cannot be instigated.

Figure 23: Funnel plot showing incidence of diabetes-related minor amputations for Solihull



Source: Hospital Episode Statistics, Health and Social Care Information Centre

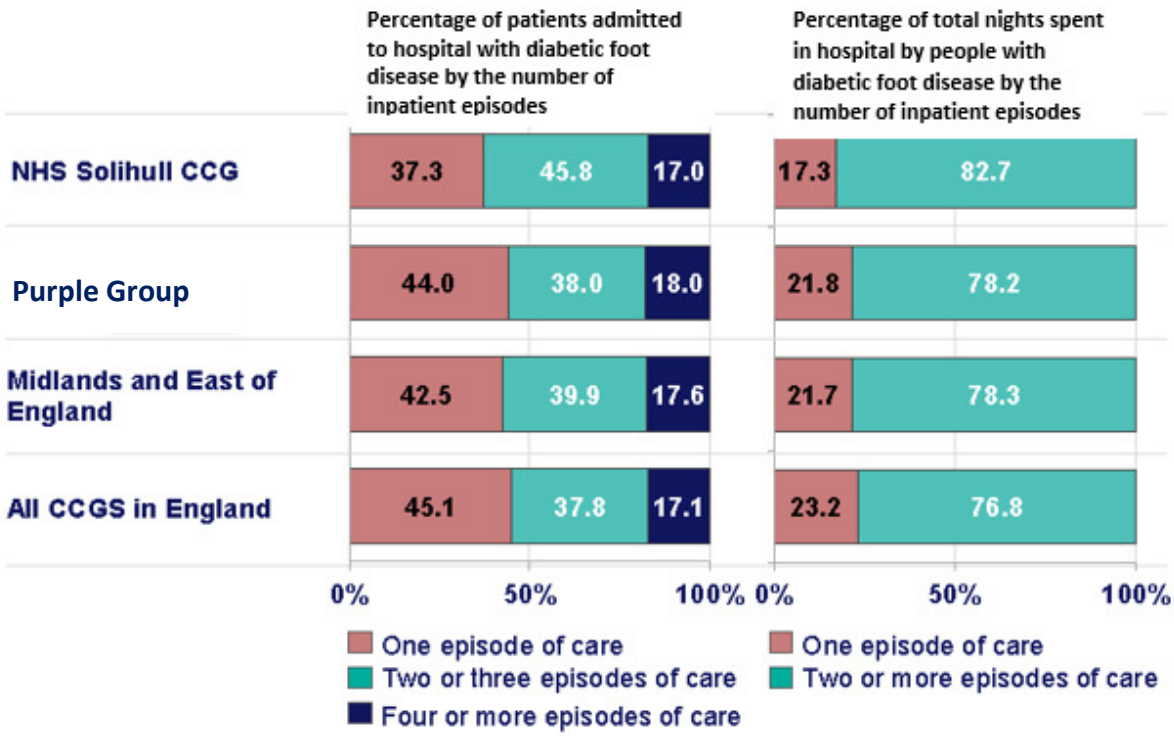
There were 43 minor amputations (below the ankle). This is equivalent to 1.3 minor amputations per 1,000 people with diabetes, which is significantly below the national average of 1.7 per 1,000. This data should be considered alongside the incidence of major amputations shown above.

Of the 212 patients with diabetes who were admitted for diabetic foot disease between 2010/11 and 2012/13 in NHS Solihull CCG, 133 or 62.7% had more than one episode of care during the three years. These patients accounted for 82.7% of the nights spent in hospital by people with a diabetic foot condition. There were 36 patients, or 17.0%, who received more than four episodes of care for diabetic foot disease during the three years.

It is important to note that multiple episodes of care may have occurred during one inpatient stay but each episode will have been under the care of a different consultant.

Heart of England NHS Trust was the provider for 94% of all diabetes foot care admissions over the last 3 years for Solihull GP-registered patients.

Figure 24: In-patient stays relating to diabetes foot-disease comparing Solihull with others



Source: Hospital Episode Statistics, Health and Social Care Information Centre

In Solihull CCG, 84.7% of episodes of care for diabetic foot conditions were accounted for by patients who had more than one inpatient stay, compared to the national average of 80.8% and 81.7% for similar CCGs. This amounted to 439 episodes of in-patient care for the period 2011-2014. This difference is statistically significant.

In addition, 133 Solihull patients had more than one episode of care for diabetic foot disease within this three years, giving a CCG rate of 62.7%. This is significantly higher than the national rate of 54.9%.

Indicator	No. in selected CCG (3 years)	CCG rate or %	Similar CCGs	England average	Lowest CCG in England	England range	Highest CCG in England
% of episodes of care for diabetic foot conditions accounted for by patients who had more than one inpatient stay	439	84.7%	81.7%	80.8%	44.3%		88.7%
% of patients who had more than one episode of care for diabetic foot disease within the three years	133	62.7%	56.0%	54.9%	23.9%		67.9%

6.4. Health Burden of Other Diabetes Complications

NHS England (2014) state that multi-morbidity is on the increase, most commonly these relate to eye disease, kidney disease, foot disease, heart disease, stroke disease as well as depression in some individuals. Nearly 1 in 5 people with diabetes have clinical depression[22]. The NDA showed that people from South Asian ethnic groups are at greater risk of cardiovascular disease (CVD) compared those from white ethnic groups and people living in the most deprived quintile are over 50 per cent more likely to experience cardiovascular complications compared to those living in e least deprived quintile.

It has not been within the scope of this HNA to look in detail at these conditions but it is a key recommendation that any service redesign of diabetes services includes a review of the above conditions in relation to providing integrated care services to diabetes patients; improve management to preventable avoidable complications such as blindness.

Further information is available on complications and mortality for England and by CCG is available in the National Diabetes Audit, *Report 2 Complications and Mortality 2012-13*

Recommendations	
7.	We should consider looking at the variations in findings in relation to the heath burden that suggest either issues with management of diabetes or differences in treatment/care pathways which suggest poorer outcomes for Diabetes patients – developing the Solihull care pathway and standards in secondary care could be one solution
8.	We should consider building links to other strategic priorities and service redesigns e.g. Stoke and Urgent care and vascular clinics to investigate the opportunities to prevent avoidable conditions and improve management to reduce non- elective hospital admissions
9.	We should consider exploring developing personalised care plans to support improvements in management where patients have multi-morbidities and look at building links with CVD, CKD and mental health services to improve outcomes for this group of patients

[22] Public Health England (2014) Adult Obesity & Type 2 Diabetes

7. Diabetes Disease Management

7.1. Care Processes and Treatment Targets for Adults

The National Institute for Health and Care Excellence (NICE) recommends nine care processes for diabetes. These are five risk factors (body mass index, blood pressure, smoking, glucose levels (Hb1Ac) and cholesterol) and three test to identify early complications (urine microalbumin, creatinine, and foot nerve and circulation examination). Eye screening is also recommended. Controlling the risk factors helps a person with diabetes reduce his or her future risk of developing diabetic complications. There are also recommended targets for Hb1AC, cholesterol and blood pressure.

Below provides data on the number of adults in Solihull who received eight of the recommended care processes (as stated above, excluding eye screening).

Figure 25: Proportion of Solihull CCG patients receiving all eight care processes recommended by NICE during 2013/14

Indicator	Period	Solihull		Commissioning region	England	England		
		Count	Value	Value	Value	Worst/ Lowest	Range	Best/ Highest
Percentage who had eight care processes	2011/12	-	67.4%	-	60.2%	18.5%		78.3%

Table 2: Proportion of diabetes patients in Solihull receiving target care outcomes compared with comparator CCG and nationally

Key facts	Solihull CCG	Comparator CCGs	West Mids Strategic Clinical Networks	England
Diagnosed diabetes prevalence in adults	**6.3%**	**6.1%**	**6.7%**	**6.0%**
Estimated total diabetes prevalence in adults	**7.7%**	**7.3%**	**8.2%**	**7.3%**
People with diabetes who have had the eight recommended care processes	**67.4%**	**56.8%**	**58.8%**	**60.2%**
People with diabetes whose last HbA1c was equal to or less than 58mmol/mol	**63.5%**	**73.7%**	**64.0%**	**62.8%**
People with diabetes meeting blood glucose, blood pressure and cholesterol targets	**22.3%**	**21.9%**	**21.2%**	**20.9%**

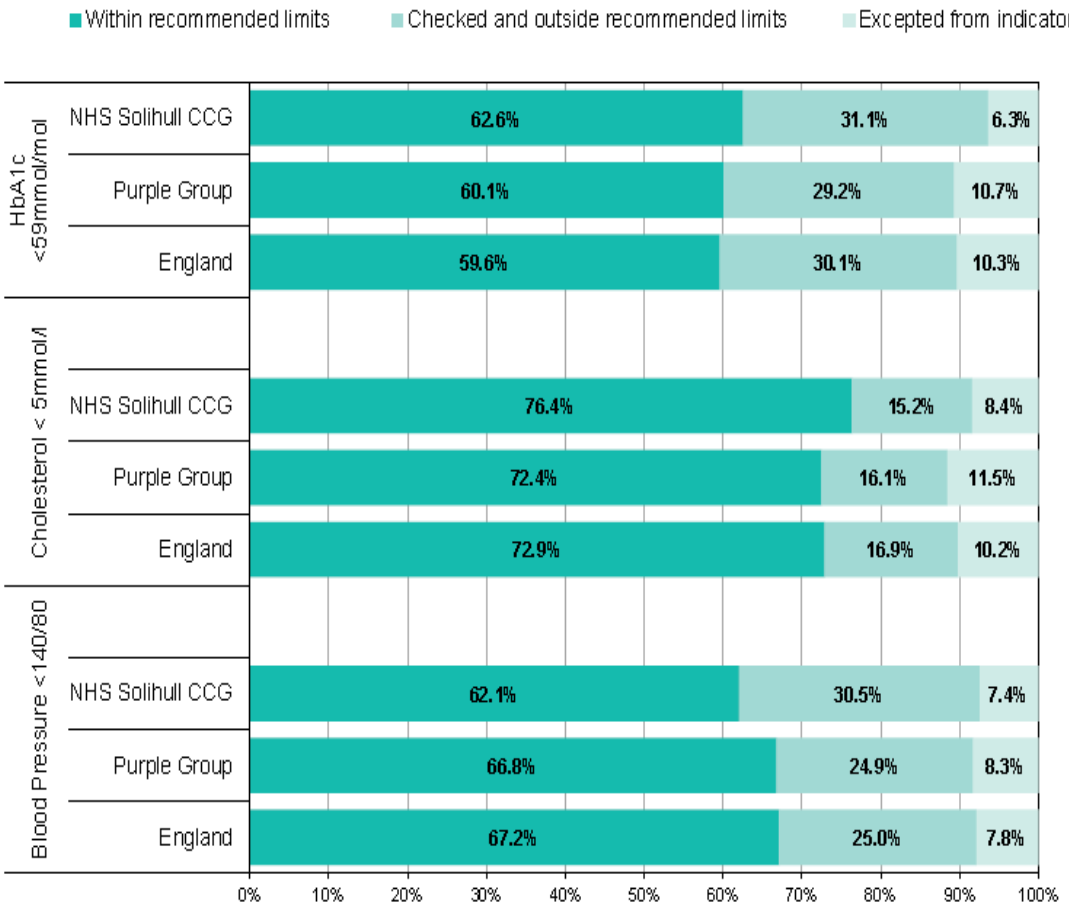
There is significant variation nationally and locally on the number of adult patients that receive all eight care processes. The table above shows that more people with diabetes in Solihull area receive all eight care processes, with 67.4 per cent receiving all eight care processes compared to the average for England which is 60.2 per cent of adults.

Uptake of care process monitoring is important as it gives a proxy indicator for how well diabetes is being actively managed. Without regular monitoring and treatment, this damage can lead to complications such as blindness, amputation and kidney disease, which have an impact on patient's quality of life and local NHS resources.

It is important to look not only at how many patients are receiving this monitoring, but also the outputs of this monitoring. Looking at outputs gives a proxy measure for how well patients' diabetes is being managed. The table below shows that a comparable or higher proportion of patients have controlled glucose and cholesterol levels, compared to the England average. However, significantly fewer people with diabetes in Solihull are achieving good blood pressure control. Here, 62.1% of

patients in Solihull are achieving a blood pressure below the recommended 140/80 compared to the England figure of 67.2%. The reasons for this should be investigated further since raised blood pressure is a major risk factor for increased risk of stroke.

Figure 26: Proportion of patients achieving the three recommended treatment targets in Solihull compared with comparator CCG and nationally



Source: Quality and Outcomes Framework, 2012/13

7.2. Variation between general practices in Solihull for diabetes care:

The register of people aged 17 and over with diagnosed diabetes in the practices belonging to the NHS Solihull CCG varied between 45 and 1,039 people. The charts below show the variation in the achievement of HbA1c, cholesterol and blood pressure targets. At practice level, 41.2% to 75.0% of people with diabetes met the HbA1c target, 60.3% to 86.7% met the cholesterol target and between 35.2% and 84.8% met the blood pressure target.

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This indicates significant variation in diabetes management across the 32 GP practices within Solihull CCG. The graphs below show that for all three treatment targets of patients having good blood sugar control and recommended cholesterol and blood pressure measurements, the difference between

the highest and lowest performing practice for all three was statistically significant. This means that the difference seen unlikely to be a chance finding. This difference in outcomes is most stark for good blood pressure control where the practice with the lowest proportion of patients with diabetes achieving adequate blood pressure control is 40%, with the best performing practice for this outcome achieving 72%.

The reason for this marked difference in diabetes outcome performance across primary care in Solihull needs further investigation as it does not appear to be due to QOF exception reporting alone within the practices.

Figure 27: Spread of recorded diabetes prevalence across all Solihull GP practices:

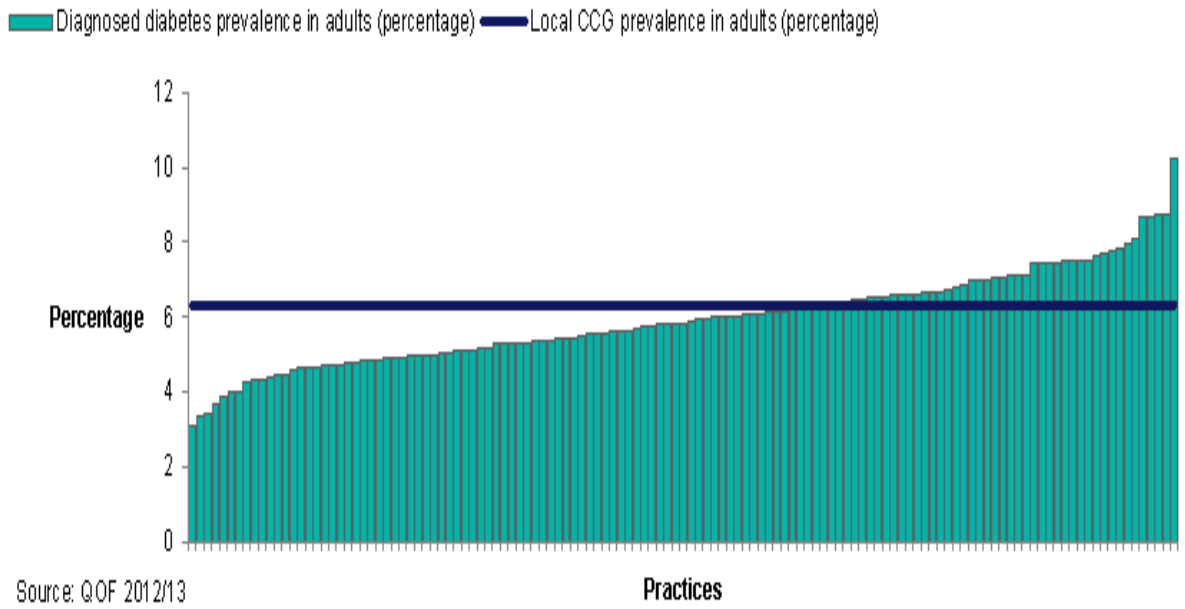


Figure 28: Variation by general practice in the measurement of the variation of HbA1c, 2012/13 showing exception reporting

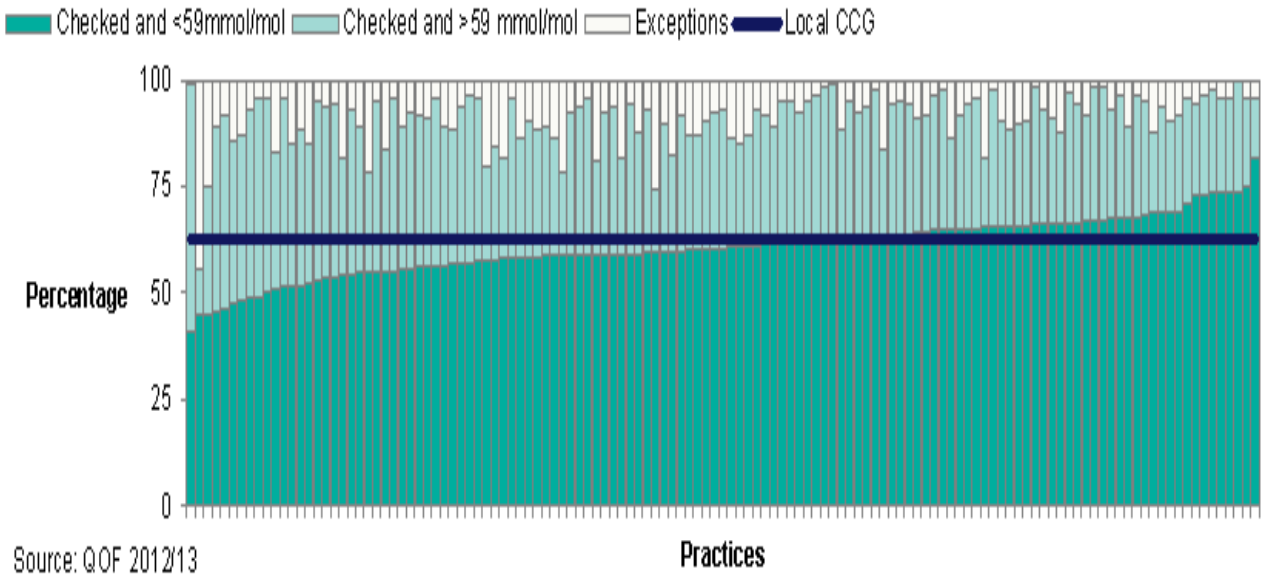


Figure 29: Variation in % of patients with good blood sugar control between Solihull practices for 2013/14

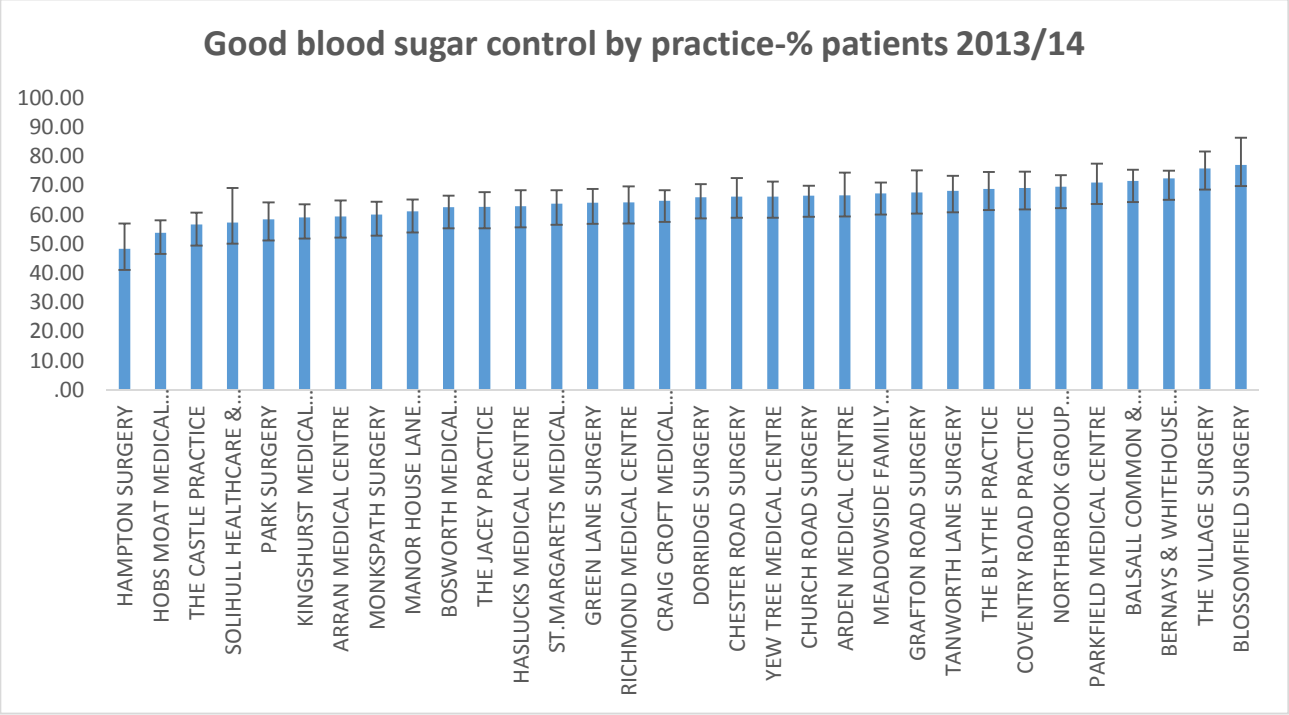


Figure 30: Variation by general practice in people with diabetes whose last cholesterol was 5mmol/l or less, 2012/13 with exception reporting levels

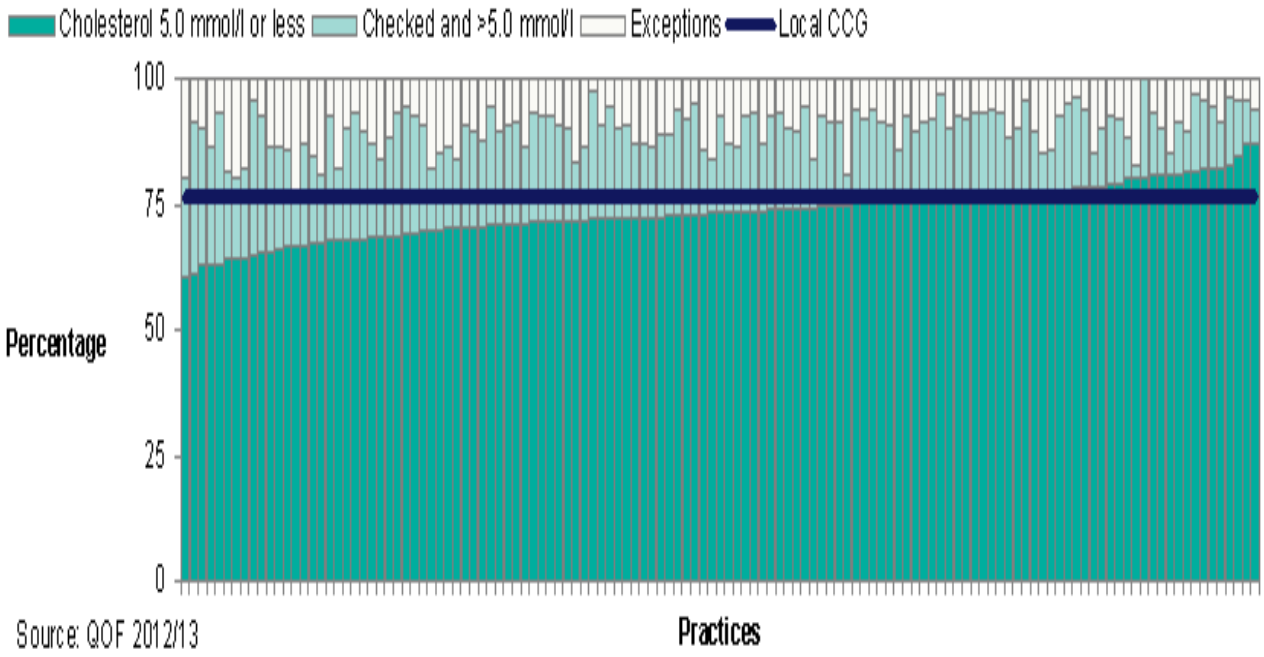


Figure 31: **Variation in % of patients with good cholesterol control between Solihull practices for 2013/14**

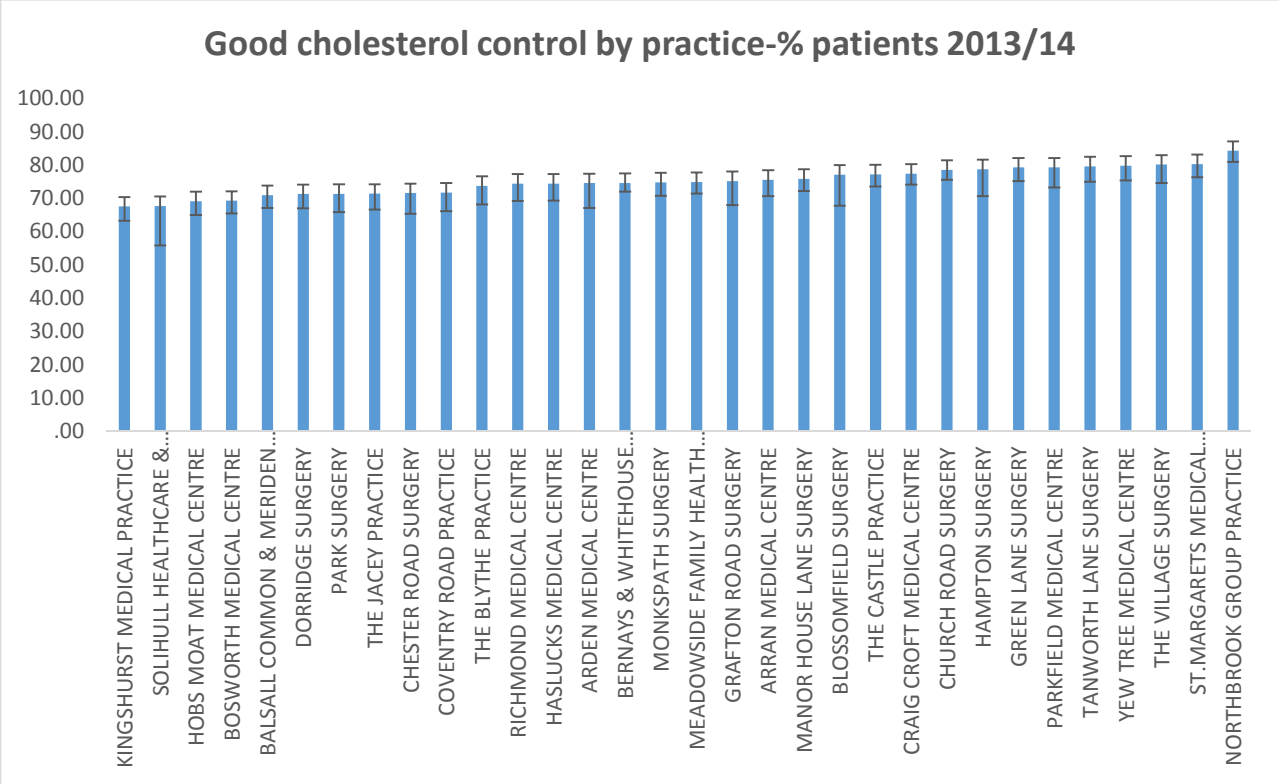


Figure 32: Variation by general practice in people with diabetes whose blood pressure was 140/80 or less, 2012/13

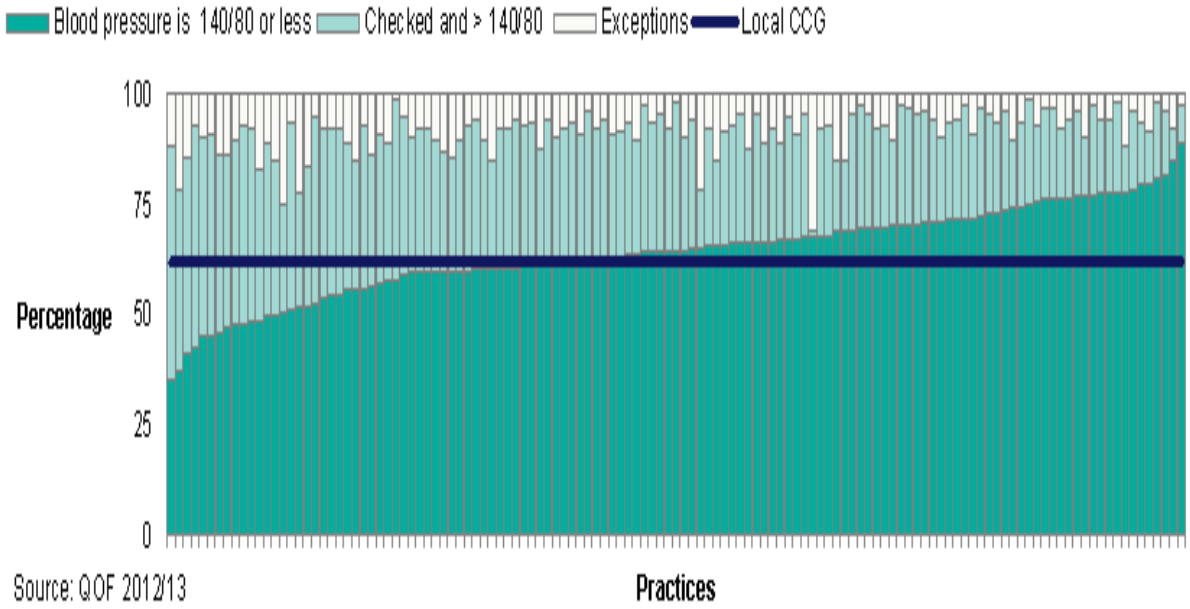
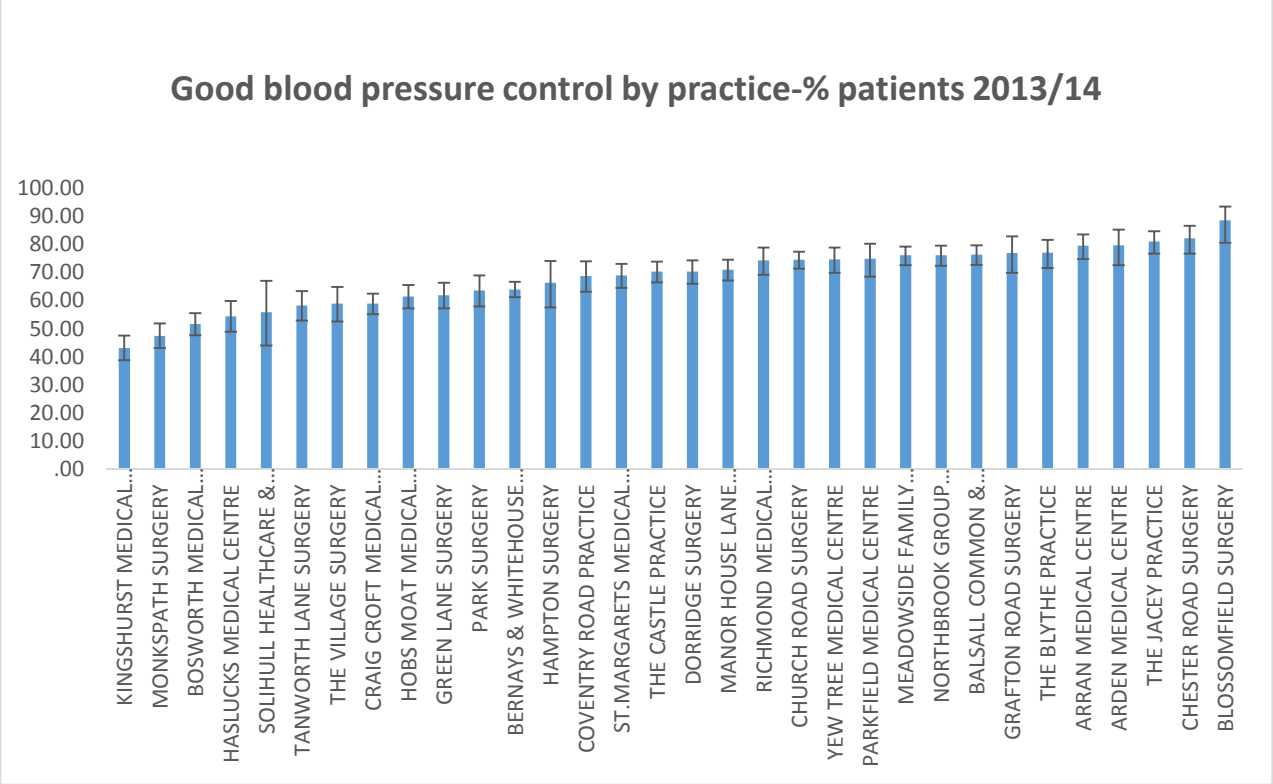


Figure 33: **Variation in % of patients with good blood pressure control between Solihull practices for 2013/14**



At the end of 2014, Public Health England produced comprehensive spine charts for each CCG showing a range of diabetes performance and outcome measures for the period 2013/14, with comparisons to the national average. These are shown below and confirm that while for the majority of indicators, Solihull is performing in line with, or better, than the national average, it is performing significantly worse for achieving good blood pressure control.

Figure 34: Spine charts comparing diabetes indicators and outcomes between Solihull and nationally

Indicator	Period	Solihull		Commissioning region	England	England		
		Count	Value	Value	Value	Worst/ Lowest	Range	Best/ Highest
Good blood sugar control in people with diabetes	2013/14	8,536	65.0%	-	61.5%	51.7%		71.0%
Good blood pressure control in people with diabetes	2013/14	8,819	67.1%	-	71.9%	64.1%		81.2%
Good cholesterol control in people with diabetes	2013/14	9,862	75.1%	-	72.3%	66.7%		81.6%
People with diabetes meeting treatment targets	2012	3,165	36.5%	35.1%	36.0%	28.5%		48.0%

Indicator	Period	Solihull		Commissioning region	England	England		
		Count	Value	Value	Value	Worst/ Lowest	Range	Best/ Highest
BMI recorded in the previous 15 months	2012/13	11,071	91.9%	-	91.7%	87.6%		96.0%
Foot check	2013/14	11,180	85.1%	-	82.1%	64.5%		90.3%
Urine tested for kidney function	2013/14	10,857	82.6%	-	80.6%	61.4%		95.5%
Smoking 6: cessation support and treatment offered (certain conditions)	2012/13	7,694	93.2%	-	93.3%	85.5%		96.6%
Flu vaccination	2013/14	10,295	79.2%	-	78.4%	69.2%		87.9%
Eye screening	2013/14	10,912	83.1%	-	82.6%	74.8%		93.6%
People with diabetes having all check-ups	2012	5,478	63.2%	57.5%	59.5%	30.4%		78.0%

Indicator	Period	Solihull		Commissioning region	England	England		
		Count	Value	Value	Value	Worst/ Lowest	Range	Best/ Highest
Angina	2010/11 - 11/12	485	1.70	1.77	1.76	2.36		1.34
Heart attack	2010/11 - 11/12	115	1.39	1.55	1.55	2.50		0.97
Heart failure	2010/11 - 11/12	380	1.54	1.72	1.74	2.53		1.25
Major amputation	2010/11 - 11/12	9	2.69	3.30	3.22	7.74		0.00
Stroke	2010/11 - 11/12	198	1.30	1.32	1.34	1.92		0.88
Kidney dialysis and transplant	2010/11 - 11/12	98	2.30	2.57	2.64	4.21		1.51

Indicator	Period	Solihull		Commissioning region	England	England		
		Count	Value	Value	Value	Worst/ Lowest	Range	Best/ Highest
Deprivation	2011	-	18.7	-	21.5	5.8		47.4
People over 65	2014	46,456	19.4%	-	16.9%	5.7%		28.3%
Diabetes prevalence	2013/14	13,138	6.8%	-	6.2%	3.5%		9.2%
Diabetes: expected prevalence (16+)	2012	12,855	7.7%*	-	7.4%	6.0%		11.0%
GP recorded prevalence of obesity in adults (16+)	2013/14	16,759	8.6%	9.9%	9.4%	14.6%		4.3%
Percentage of population who identify their ethnicity as Asian or Asian British	2011	13,561	6.6%	7.4%	7.8%	0.5%		60.9%

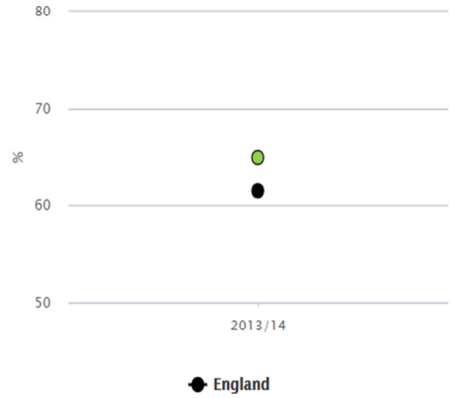
Looking at trend data over the previous two years for the three recommended diabetes treatment targets shows that while the proportion of diabetes patients within Solihull achieving good blood pressure control has increase between 2012/13 and 2013/14, it remains significantly below the national average.

Figure 35: Graphs showing change in trend between 2013/13 and 2013/14 in Solihull for the three diabetes treatment targets

Good blood sugar control in people with diabetes

NHS Solihull CCG

Proportion - %



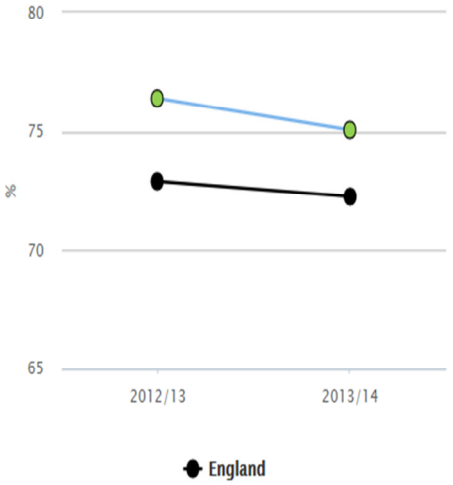
Period	Sig	Count	Value	Lower CI	Upper CI	Midlands And East Of England	England
2013/14		8,536	65.0	64.2	65.8	61.1	61.5

Source: QOF

Good cholesterol control in people with diabetes

NHS Solihull CCG

Proportion - %



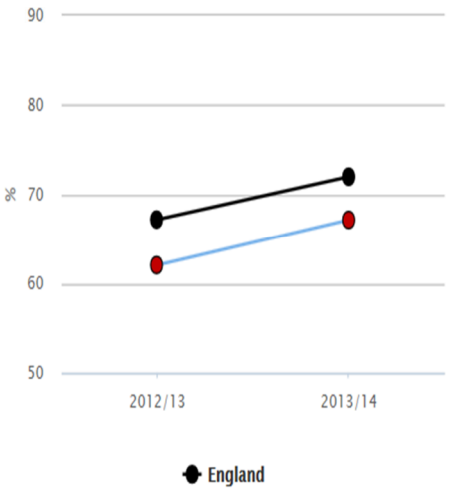
Period	Sig	Count	Value	Lower CI	Upper CI	Midlands And East Of England	England
2012/13		9,209	76.4	75.6	77.2	72.4	72.9
2013/14		9,862	75.1	74.3	75.8	71.9	72.3

Source: QOF

Good blood pressure control in people with diabetes

NHS Solihull CCG

Proportion - %



Period	Sig	Count	Value	Lower CI	Upper CI	Midlands And East Of England	England
2012/13		7,481	62.1	61.2	62.9	66.5	67.2
2013/14		8,819	67.1	66.3	67.9	70.8	71.9

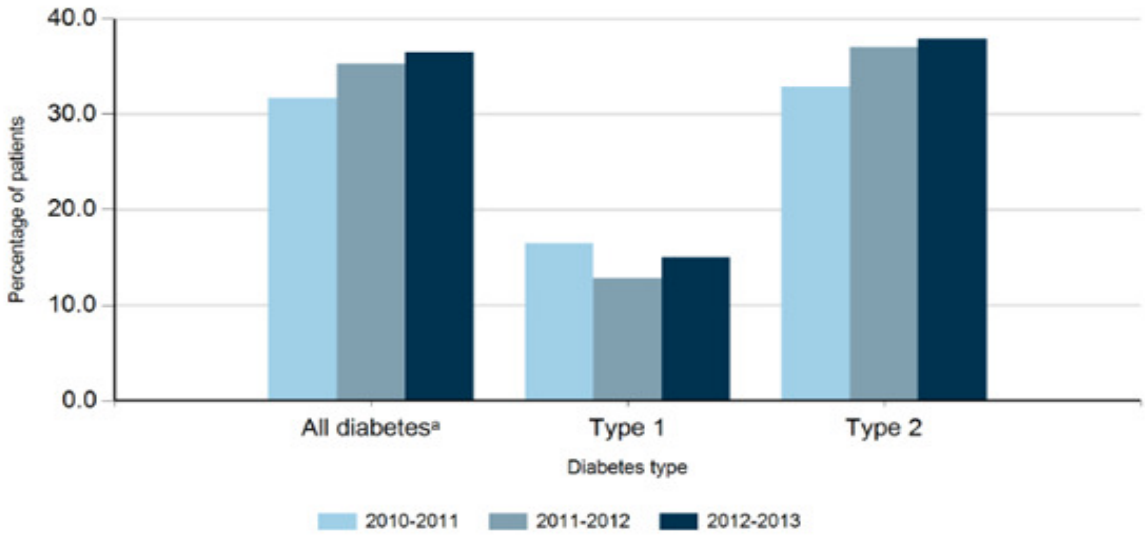
Source: QOF

7.3. Care Processes and Treatment Targets for Children and Young People

Guidelines specify a starting age of 12 years for commencing all care processes with the exception to HbA1c, which should be recorded in children and young people of all ages with diabetes[23]. The National Paediatric Diabetes Audit (NPDA) collects information on the eight care processes recommended by NICE, however the measurement of blood creatinine was removed from the dataset in 2011-12 as it was deemed to be poorly representative as a care process in children and young people.

There is insufficient data locally available to provide analysis of the number of children and young people that receive all seven of the care processes. The NPDA (2013) state that this is mainly due to issues with reporting and significant under-reporting of the number of care processes being performed, but not recorded for audit purposes. Data from the NPDA suggests that recordings show an increase in children over 12 years receiving all care processes to 6.7 per cent for 2011-12. This is compared to the 60.5 per cent for all Diabetes and 42.4 per cent for Type 1 in the NDA for adults 2011-12. Below, shows the data for Solihull comparing Type 1 and Type 2 diabetes treatment targets that have been produced by the National Diabetes Audit for 2012/13.

Figure 36: Percentage of patients in Solihull achieving HbA1c less than or equal to 58mmol/mol, cholesterol under 5mmol/L and BP target by NDA year and diabetes type



The National Diabetes Audit 2012/13 has produced a range of performance data for Solihull CCG on diabetes outcomes and indicators. The participation rate for Solihull GP practices was 71.9% (23 out of 32 practices). The audit collected data for 8,668 patients with diabetes is Solihull made up of 0.42% Type 1 and 4.6% Type 2. The tables below from the NDA 2012-13 show the proportion of Solihull patients who receive the NICE recommended care processes over a three year period by diabetes type and also by age grouping for 2012/13.

[23] RCPCH (2013) National Paediatric Diabetes Audit Report 2011-12

Figure 37: Percentage of patients in Solihull and nationally receiving NICE recommended care processes, by care process, diabetes type and audit year

		All diabetes[a]			Type 1			Type 2		
		2010-2011	2011-2012	2012-2013	2010-2011	2011-2012	2012-2013	2010-2011	2011-2012	2012-2013
HbA1c[b,c]	CCG/LHB	94.2%	94.6%	92.5%	85.7%	86.3%	74.1%	95.5%	95.8%	94.6%
	England & Wales	92.5%	90.3%	92.4%	86.0%	83.0%	80.5%	93.5%	91.3%	93.8%
Blood pressure	CCG/LHB	95.9%	96.1%	95.0%	87.0%	88.0%	85.7%	96.9%	97.0%	96.1%
	England & Wales	95.0%	95.0%	95.3%	88.7%	88.4%	88.8%	95.9%	95.8%	96.1%
Cholesterol	CCG/LHB	93.7%	93.8%	92.6%	78.5%	78.5%	77.2%	95.5%	95.5%	94.2%
	England & Wales	91.6%	90.9%	91.1%	78.8%	77.8%	78.0%	93.1%	92.4%	92.5%
Serum creatinine	CCG/LHB	94.2%	94.7%	93.8%	79.4%	82.0%	79.3%	96.0%	96.2%	95.3%
	England & Wales	92.5%	92.5%	92.5%	81.2%	81.1%	81.0%	93.8%	93.8%	93.7%
Urine albumin[d]	CCG/LHB	75.1%	78.9%	73.7%	52.7%	56.2%	48.1%	77.7%	81.4%	76.2%
	England & Wales	75.1%	76.0%	73.6%	58.4%	59.2%	57.1%	77.1%	77.9%	75.4%
Foot surveillance	CCG/LHB	87.6%	88.3%	86.8%	72.7%	72.4%	70.6%	89.6%	90.2%	88.6%
	England & Wales	84.3%	85.3%	85.1%	71.5%	72.8%	72.3%	86.1%	87.0%	86.7%
BMI	CCG/LHB	91.7%	91.2%	90.0%	81.0%	80.9%	79.0%	93.1%	92.4%	91.3%
	England & Wales	89.9%	90.3%	90.7%	83.4%	83.7%	84.1%	90.8%	91.3%	91.5%
Smoking	CCG/LHB	86.7%	87.3%	88.1%	77.8%	78.2%	78.1%	87.7%	88.3%	89.2%
	England & Wales	84.8%	85.1%	86.1%	78.6%	79.0%	79.8%	85.7%	85.9%	86.8%
Eight care processes[c,e]	CCG/LHB	63.5%	67.4%	63.2%	38.7%	43.7%	35.7%	66.4%	70.1%	66.1%
	England & Wales	60.6%	60.5%	59.9%	43.3%	43.2%	41.3%	62.8%	62.6%	61.9%

A red, amber, green scale has been used in these tables to indicate the level of achievement

RAG - Individual Care Processes	RAG - All eight Care processes
<90%	<55%
90% - 95%	55% - 65%
>95%	>65%

Figure 38: Percentage of patients in Solihull and nationally receiving NICE recommended care processes, by care process, diabetes type and age-group

		Type 1				Type 2			
		Under 40	40 to 64	65 to 79	80 and over	Under 40	40 to 64	65 to 79	80 and over
HbA1c[a]	CCG/LHB	59.6%	82.3%	93.2%	100.0%	85.9%	93.2%	96.4%	94.3%
	England & Wales	68.9%	88.0%	93.5%	92.4%	85.7%	92.7%	95.6%	93.6%
Blood pressure	CCG/LHB	73.8%	93.2%	94.6%	100.0%	88.1%	94.5%	97.8%	96.8%
	England & Wales	81.3%	93.0%	96.9%	95.8%	89.3%	95.0%	97.5%	96.8%
Cholesterol	CCG/LHB	63.1%	85.1%	91.9%	92.3%	83.6%	92.7%	96.7%	93.1%
	England & Wales	64.0%	86.1%	92.6%	89.5%	82.5%	91.6%	94.6%	91.7%
Serum creatinine	CCG/LHB	64.9%	87.0%	95.9%	92.3%	84.7%	93.5%	97.4%	95.8%
	England & Wales	68.5%	88.1%	94.0%	93.2%	84.8%	92.3%	95.6%	94.6%
Urine albumin[b]	CCG/LHB	32.5%	56.5%	66.2%	61.5%	61.0%	69.7%	81.9%	79.4%
	England & Wales	43.7%	63.0%	76.4%	75.0%	59.2%	72.0%	79.6%	77.0%
Foot surveillance	CCG/LHB	56.5%	78.0%	87.8%	84.6%	75.1%	85.8%	92.2%	87.8%
	England & Wales	59.3%	79.4%	87.6%	83.8%	73.8%	84.8%	90.1%	85.5%
BMI	CCG/LHB	70.8%	84.5%	85.1%	76.9%	84.7%	90.8%	93.7%	86.8%
	England & Wales	77.6%	87.9%	91.9%	85.5%	86.4%	91.4%	93.6%	87.4%
Smoking	CCG/LHB	71.6%	82.0%	83.8%	84.6%	86.4%	88.9%	90.9%	85.9%
	England & Wales	75.8%	82.1%	84.8%	79.4%	84.1%	86.8%	88.3%	83.3%
All eight care processes[c]	CCG/LHB	22.2%	44.1%	54.1%	38.5%	49.2%	61.3%	71.8%	65.1%
	England & Wales	29.1%	47.7%	59.9%	54.4%	46.3%	59.2%	66.7%	59.8%

This data indicates that there are significant gaps across several areas of diabetes care in Solihull, particularly for Type 1 diabetes, where the number receiving the care processes are sub-optimal, and for people with Type 2 diabetes under the age of 40, which is an increasing number nationally due to rising obesity levels.

Recommendations	
10.	Investigate the variation in numbers of patients that receive all eight care processes (seven in children and young people) and develop clear commissioning plans to support better management of diabetes in primary care (e.g. by having explicit outcome targets to be achieved in diabetes care detailed in a revised Locally Enhanced Service agreement between CCG and GPs)
11.	Provide training for GPs on improving diabetes care and outcomes for patients in primary care
12.	Investigate the gap in data in analysing care processes for children and young persons (CYP) with type 1 diabetes to gather a baseline to then plan improvements in number of CYP receiving all seven care processes

8. Spend on Diabetes Care

Diabetes is estimated to have cost the UK £9.8 billion in direct costs in 2010/2011, this equates to approximately ten per cent of the total health resource expenditure. It is estimated that 80 per cent of these costs are incurred in treating potentially avoidable complications. In 2012/13 42.5 million items were prescribed to treat diabetes, £764 million was spent on drugs to treat diabetes in primary care nationally[24].

Based on annual programme budget expenditure for diabetes the cost per head of population is £27.50[25]. The true expenditure per head of the population is likely to be much higher if included the cost of managing diabetic complications managed in non-diabetic services.

The National Audit Office (NAO) in 2012 highlighted the challenge for Commissioners in being able to clearly understand the costs of diabetes at a local level without good quality cost data and the impact in determining the most effective way to deliver diabetes services that meet the needs of the population.

Spend versus outcome on diabetes care in Solihull

Quadrant analysis charts (shown below) plot spend against an outcome measure. The cost and outcome measures have been standardised to allow direct comparisons across different scales. The cost data is prescribing on all anti-diabetic items. The outcome measure is the percentage of patients with diabetes in whom the last HbA1c was less than 59 mmol/mol. CCGs within the dotted box do not have a statistically significant different level of spending and outcomes from England.

The charts below show the total standardised Net Ingredient Cost (NIC) of all prescriptions for items to treat and monitor diabetes per patient diagnosed with diabetes between April 2012 and March 2013 against a standardised proportion of people with an HbA1c measurement of 59mmol/mol or less for 2012/13 for the Solihull CCG. It also shows the movement of the CCG in terms of the difference between spend and outcome between 2011/12 and the following year. In the case for Solihull, between 2011/12 and 2012/13 there was some improvement in efficiency in that outcomes improved over this year period with similar spend.

[24] NHS England (2014) Action for Diabetes

[25] NICE (2011) NICE Cost Impact and Commissioning Assessment for Diabetes in Adults.

Figure 39: Spend and Outcome quadrant analysis chart for Solihull, 2012/13

8.1. Prescribing Costs

Anti-diabetic drugs are medicines that help control blood sugar levels in people with diabetes mellitus. Treatment of Type 1 diabetes is limited to insulin replacement, while Type 2 diabetes is treatable by a number of therapeutic approaches. Drug therapy may be directed towards increasing insulin secretion, increasing insulin sensitivity, or increasing insulin penetration of the cells. Anti-diabetic drugs may be subdivided into nine groups; insulin, sulfonylureas, alpha-glucosidase inhibitors, biguanides, meglitinides, thiazolidinediones, and the newer GLP-1 mimetics, SGLT-2 inhibitors and DPP-4 inhibitors.

Since 2007- 8 drugs for diabetes is the British National Formulary section (BNF Section 6.1) has accounted for the highest costs of any of the 200 sections listed. Since 2005/6, items and net ingredient cost of antidiabetic drugs for England have increased by 83.9 per cent and 86.0 per cent respectively[26]. Over the period 2005/6 to 2013/14 there was an increase in the number of items for diabetes of 66.5 per cent (18.0 million) and in net ingredient cost of 56.3 per cent (£289.2 million). In 2005/6 there were 27.1 million items at a cost of £513.9 million. This growth compares with a growth of 42.3 per cent in items and 8.2 per cent for cost of all prescribing over the same period[27].

Data locally for CCGs shows that the percentage cost of diabetes drugs, both oral and injectable is

[26] HSCIC (2013) Prescribing For Diabetes England 2005-2006 to 2012/13
[27] HSCIS (2014) Prescribing for Diabetes England 2005/2006 to 2013/14

increasing in primary care. Prescription charges for CCGs covers prescriptions written by general practitioners, nurses, pharmacist and others working in primary care

Blood glucose testing strips are used with blood glucose meters to allow patients to monitor their sugar levels and avoid hyper- or hypoglycaemia. Although they are not drugs, the test strips can be prescribed on the NHS and they account for a significant portion of spend on diabetes care.

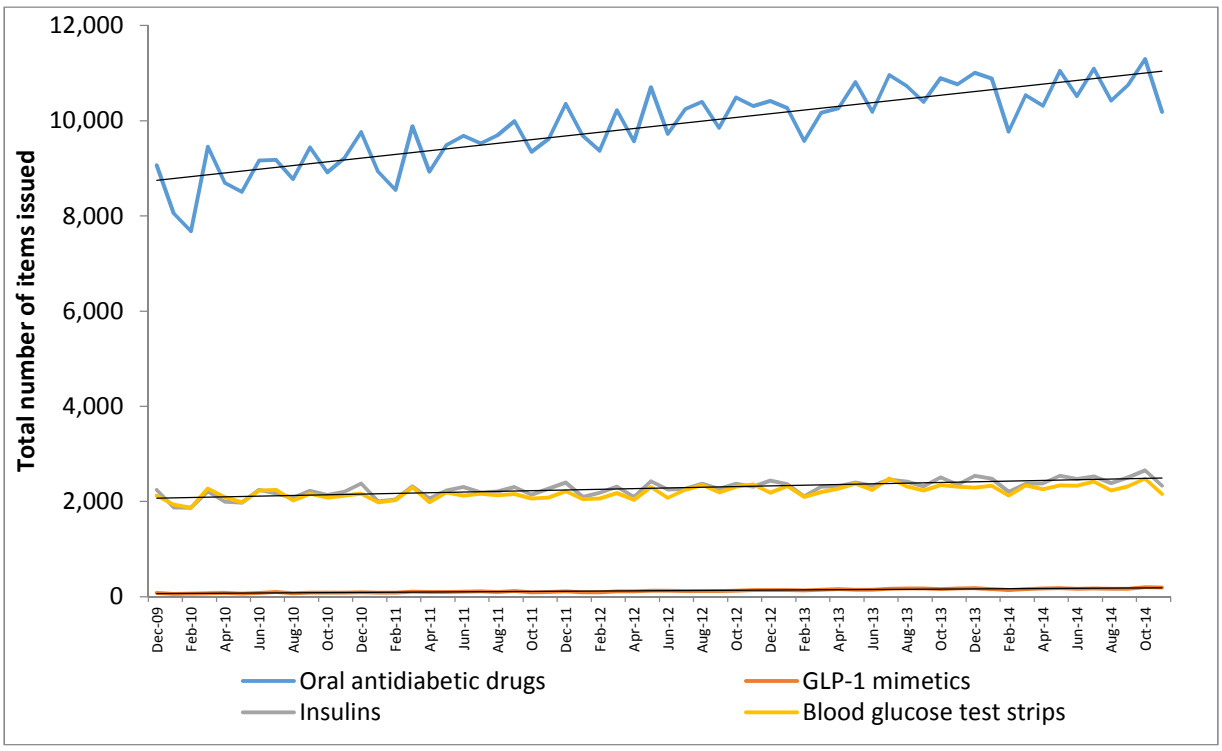
The last 5 years has seen a dramatic growth in the market of antidiabetic drugs, particularly following the launch of new therapeutics groups: DPP-4 inhibitors the injectable GLP-1 mimetics and most recently the SGLT2 inhibitors. The majority of these agents are reasonably expensive but have been granted NICE Technology Appraisals recommending their prescribing in the NHS; updated NICE diabetes guidance is expected to be launched later in 2015 which might reposition some of these therapies earlier in the treatment pathway. Increasingly these newer drugs are being initiated and maintained in primary care and will present a significant and growing cost pressure to the local NHS.

NHS Solihull CCG spent £3,340,000 on prescribing for anti-diabetic items between April 2012 and March 2013. This equated to £277.48 per person with diabetes compared to the England average which was £281.52. Prescriptions to treat diabetes accounted for 9.4% of the prescribing budget for the CCG.

Specific diabetes prescription items and cost

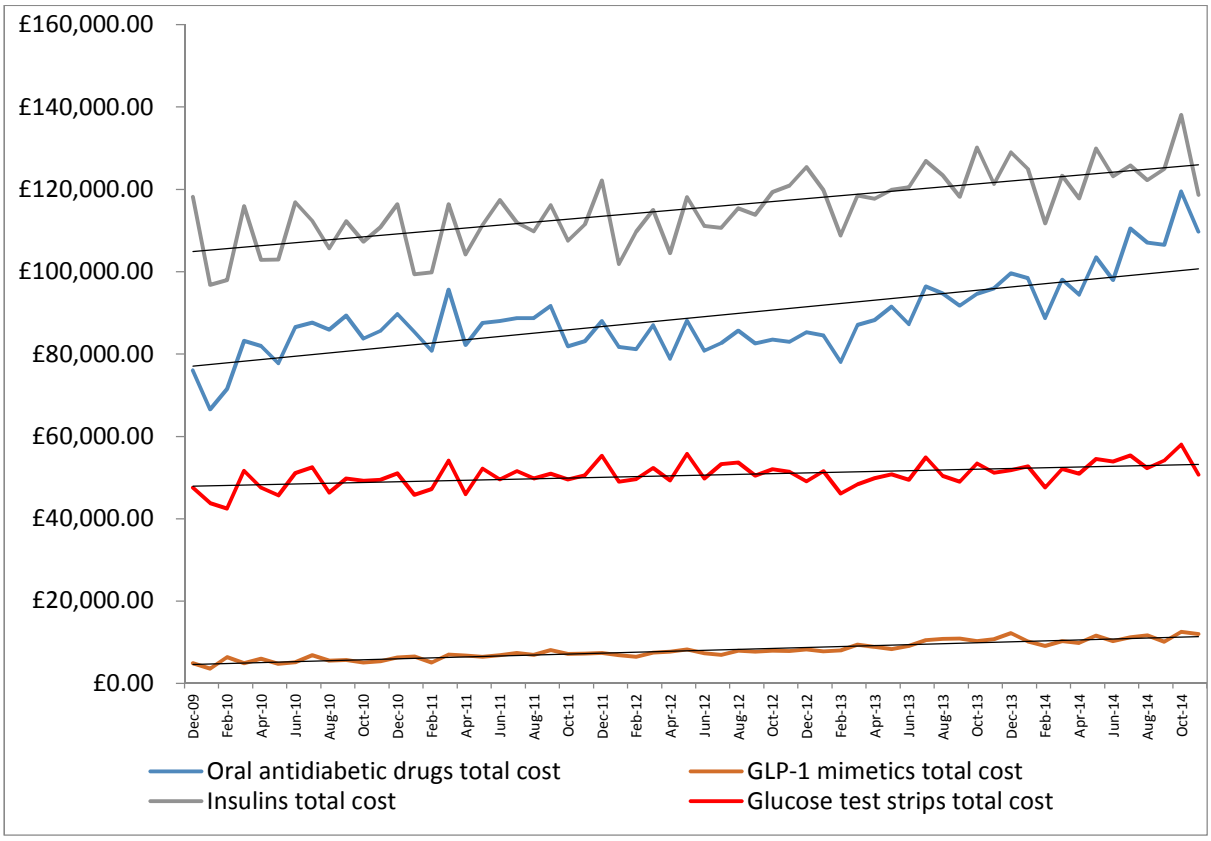
The graphs below show a breakdown of the total drug-items used to treat diabetes by Solihull CCG together with an indication of total spend for these items over the past five years since 2010 to end of 2014. This highlights that around 11,000 oral anti-diabetic items were used by the end of 2014, up 2,000 since 2010.

Figure 40: Total diabetic items issued per month in Solihull CCG, 2010-2014



During 2013-14, NHS Solihull CCG spent £1.2 million on oral antidiabetic drugs, £1.5 million on insulin, £0.6 million on blood glucose testing strips and £84,000 on GLP1-mimetics (source: local ePACT data). Graph 41 shows the monthly spend on these diabetic items.

Figure 41: Total spend on diabetic items per month for Solihull CCG, 2010-2014



8.2. Secondary care spending for diabetes

The tables below show the costs of providing secondary diabetic care for Solihull for the year 2013/14 and for the period April-November 2014. It covers the total number of admissions (both elective and emergency) and for follow-up and out-patient appointments. For 2013/14, a total of 1,760 people were seen, with an average cost of £563 per patient spend. The secondary care spend total cost for this year was £991,159, more than half of which was spent on follow up out-patient appointments (6,289 appointments in total

Table 3: Diabetes spend per patient 2013/14 for admissions and outpatient attendances

	TOTALS		AVERAGES PER PATIENT	
SUMMARY	NUMBER	COSTS £	NUMBER	COSTS £
Patients	1,760	£991,159		£563
First OP attendances	927	£212,609	0.53	£121
Follow up OP attendances	6,289	£542,979	3.57	£309
OP procedures	230	£34,319	0.13	£20
Emergency admissions	129	£189,367	0.07	£108
Elective Admissions	17	£11,885	0.01	£7

Table 4: Diabetes spend per patient 2014/15 April-November for admissions and outpatient attendances

	TOTALS		AVERAGES PER PATIENT	
SUMMARY	NUMBER	COSTS £	NUMBER	COSTS £
Patients	1,521	£569,461		£374
First OP attendances	642	£121,711	0.36	£69
Follow up OP attendances	3,915	£294,038	2.22	£167
OP procedures	149	£22,008	0.08	£13
Emergency admissions	90	£118,071	0.05	£67
Elective Admissions	20	£13,632	0.01	£8

For the six month period in 2014 (Apr-Nov) already secondary care diabetes spend is at more than half of the cost of the entire previous year with a some 80% of patient numbers seen in 2013/14 seen in these first six months of the following year.

Recommendations	
13.	We should consider investigating how we can get better cost data to measure cost effectiveness and an initial deep dive looking at service outcomes against spend will provide data to inform developing any new models of care
14.	We should also look at meeting future needs of the population through service redesign, particularly at reducing the cost burden associated with secondary care costs, particularly with diabetes prevalence set to increase and availability of newer treatments, prescribing costs could rise further

9. Diabetes Services Provision in Solihull

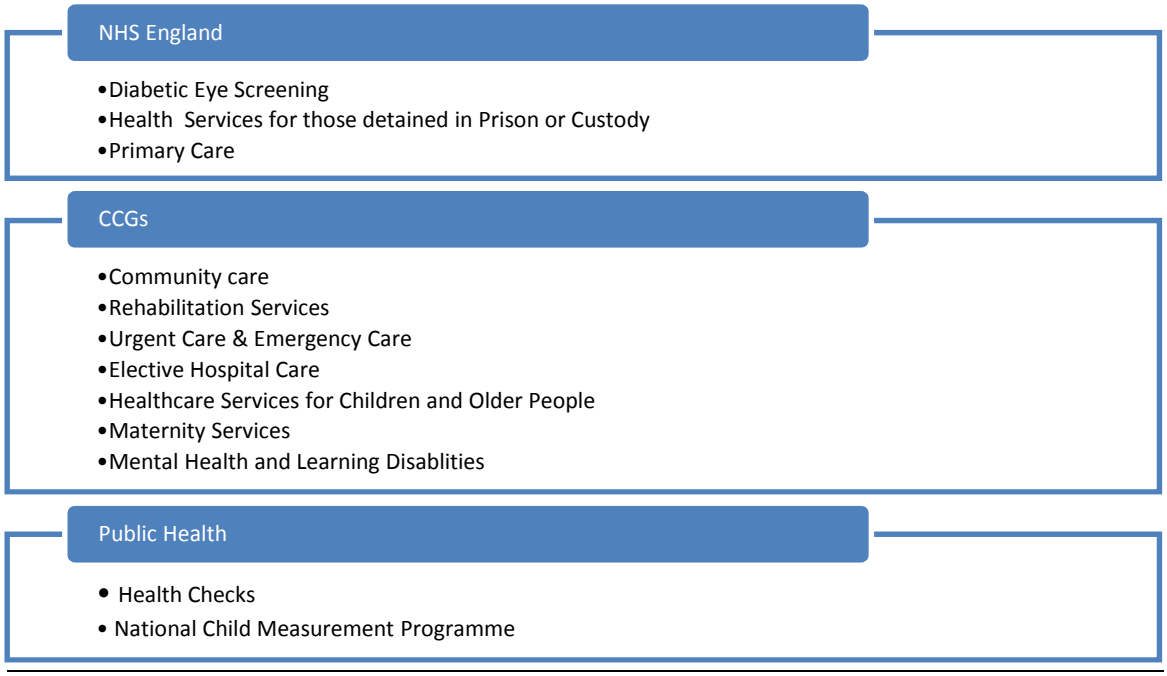
Commissioning of Diabetes services in Solihull has evolved overtime and current service provision reflects the legacy arrangements made by former Primary Care Trusts (PCTs). There is a variety of services available to diabetes patients in Solihull but there is no diabetes clinical network within the borough.

Local NHS service specifications are based on meeting national standards and providing high quality diabetes services. The following national standards have informed local services specifications;

- *National Service Framework for Diabetes* (2001)
- *NICE Guidance Type 1 Diabetes* (2004)
- *NICE Guidance Type* 2 (2008)
- *NICE Guidance Type 1 & 2 Patient Education Model* (2003)
- *NICE Guidance in Pregnancy* (2008)

NICE guidance on *Diabetic Foot Problems: Prevention and Management of Foot Problems in People with Diabetes* are in progress and due in June 2015.

Figure 42: Commissioning responsibilities for Prevention and Clinical Care for Diabetes



9.1. Provision of Diabetes Services in Primary Care

General Practitioners (GPs) have an important role to play in ensuring that all people with diabetes receive effective diabetes care. There are clinical indicators for diabetes in the Quality and Outcomes Framework (QOF); this is a key element of the contract for the provision of General Medical Services. GP practices are responsible for ensuring that all people with diabetes registered on their practice lists are receiving planned diabetes care.

GP Practices are critical points of contact for people with diabetes in terms of early diagnosis and prevention of Type 2 diabetes. The GP who makes the initial diagnosis of diabetes is responsible for agreeing with the person with diabetes where they will receive each element of their diabetes care and who will provide this. Increasingly, the routine follow up of people with diabetes is also undertaken within primary care.

Current services provided within Solihull to align with diabetes:

9.2. Provision of Diabetes Services in Secondary & Community Services

A brief description of the services available to children and adults across Birmingham in NHS secondary and community services is described below;

Birmingham Children's Hospital Foundation Trust (BCH)

The Trust provides a range of hospital and community services to children and young people. This includes prevention, diagnosis, initial and continued management for children and young people up to the age of 19 years.

- Diagnosis and Management of Type 1 Diabetes
- Dedicated clinics for young people with Type 2 Diabetes
- Care for children & young people with rare diabetes syndromes
- Insulin Pump Therapy
- Patient Education

Solihull Community Healthcare

Diabetes services commissioned are based on historic Primary Care Trust (PCT) Contracts to provide services for patients over the age of eighteen with Type 1 or Type 2 Diabetes, these are described below;

Community Diabetes Service

- Range of services for patients with unstable diabetes
- Patient Education (for Type 1 & 2 diabetes) including diet and weight management
- Oral Glucose Tolerance Testing (OGTT) Clinics
- Insulin initiation and reviews
- GLP-1 therapies assessments
- Intermediate clinics – for patients with complex needs
- Care for People with Diabetes Who are Housebound

Birmingham Women's Hospital (BWH)

Birmingham Women's Hospital provides a range of services for screening and providing care for women with pre-existing and gestational diabetes. These Include;

- Weekly consultant led Diabetes clinic (Tuesday)

- Gestational Diabetes Mellitus (GDM) clinics run three times a week by midwives
- Weekly joint clinic with midwives and a dietician to review new diagnosed and review women to assess glycaemic control and provide antenatal care (Friday)
- Pre-conception service for women with Type 1 & Type 2 diabetes
- Inpatient diabetes service
- Telephone service for out-patients – provide advice, results & arrange follow up

Heart of England NHS Foundation NHS Trust (HEFT)

The Diabetes service at Heartlands Hospital operates as the main hub for all diabetes services provided by HEFT. Services are also available at Good Hope Hospital and Solihull Hospital.

- Weight management service
- Endocrinology service
- Inpatient diabetes service
- Diabetes Retinal Screening
- Paediatric diabetes
- Insulin Pump
- Preconception clinic
- Joint diabetes and antenatal clinic
- Joint hospital diabetes and renal clinic
- Diabetes foot clinic
- Erectile Dysfunction
- Education programme

University Hospital Birmingham (UHB)

The Diabetes Centre is based at Nuffield House on the old Queen Elizabeth Hospital site. The Trust provides a range of diabetes education, advice and treatment;

- Clinics for Patient with Chronic Kidney Disease related to Diabetes
- Transition Clinic for Paediatrics
- Foot Clinic
- Lipid Clinic
- Pre-Conception Clinic
- Antenatal Clinic
- Insulin Pump Clinic
- Erectile Dysfunction
- Diabetes Education

9.3. Diabetic Eye Screening

Eye screening is run by Heart of England Foundation Trust (HEFT) for patients across Solihull. The aim of the diabetic eye screening is to reduce the risk of sight loss amongst people with diabetes by the prompt identification and effective treatment if necessary of sight threatening diabetic retinopathy.

Diabetic eye screening is just one component of diabetes care, the screening programme should be integrated with routine diabetes care[28].

Free diabetic eye screening is offered at a range of different venues including hospitals and opticians within Solihull, details are available on the retinal screening webpage http://www.retinalscreening.co.uk/

Gaps in Service Provision

Due to the legacy arrangements there are potentially issues regarding equity, access and variation to services therefore, a full gap analysis would be beneficially in understanding fully the impact for patients and opportunities for service redesign.

Recommendations	
15.	We need to perform a service review, gap analysis and equalities assessment to understand to the extent to which secondary care services are meeting the needs of diabetes patients and improving outcomes this should include also; reviewing the National Inpatient Diabetes Survey and other data to identify issues around quality, safety and patients in control e.g. Insulin
16.	CCG should consider the role of the voluntary sector in supporting better prevention and management-this has been outside the scope of this HNA
17.	We should consider communicating more widely their plans to improve outcomes through primary care e.g. digital communication & stakeholders engagement and also look at the benefits of having a nominated clinical leads for diabetes and/or links to a diabetes network for Solihull or the region to increase coordination/leadership on diabetes

[28] NHS Commissioning Board (2012) Public health functions to be exercised by the NHS Commissioning Board Service specification No.22, NHS Diabetic Eye Screening Programme

10. Cost Effectiveness of Service Provision

There is limited data available to this needs assessment about the cost effectiveness of diabetes service provision in Solihull

Cost of Diabetes Services

The National Audit Office (NAO) (2012) reported that no Primary Care Trusts delivered all nine care processes to all people with diabetes and that this wasn't just due to need or spends. They conclude that variations are also due to local organisation and management of health services. The report also stated that Department of Health's cost data do not capture the full costs of diabetes care therefore it is difficult to truly understand the cost effectiveness and benefits of existing models of care. The report found variation in patient education, training for NHS staff, and in proving specialist nurses, despite evidence to show that such interventions lead to long term savings.

Through earlier detection and management of diabetes- related complications in primary care, fewer people with diabetes would require more costly specialist treatment. This is estimated to make a potential saving of £170 million a year by reducing hospital activity[29]. The NAO suggested that if the NHS changed the way it managed diabetes patients it could lead to more cost effective diabetes services by;

- Reducing hospital admissions for people with diabetes – could save £34 million in avoidable hospital activity
- Reducing insulin errors in hospital by 50 per cent – could save £3.2 million a year by improving patient care
- Reducing late referrals to specialist foot teams – could save £4 million a year by decreasing the number of major amputations among people with diabetes
- Ensure safer discharge from hospital for people with diabetes – could save £99 million a year through reducing emergency readmissions to the same rate as for people of the same age without the condition

Quality Standards Programme

NICE published in 2011 the *NICE Cost Impact and Commissioning Assessment for Diabetes in Adults*. This cost impact and commissioning assessment helps commissioners and service providers to consider the commissioning implications and potential resource impact of implementing the recommendations from the NICE guidance. This is regard to be the most effective way to support improvements in the quality of care offered to patients.

Table x below provides some evidence about the costs required to achieving the quality standards

[29] National Audit Office (2012) The Management of Adult Diabetes Services in the NHS

Table 5: Estimated Costs of achieving the Diabetes Quality Standards

Area of Care	Estimated Resource Impact
Structured Education	Costs for structured education programmes, for example, Dose adjustment for normal eating (DAFNE) courses, range from £300 to £350 per patient. Structured educational programmes might reduce repeat visits for treatment and therefore reduce costs.
Lifestyle and Self Care	Improvement in lifestyle and self-care might reduce admissions to hospital. For example this might lead to a reduction in diabetes-related admissions. A non-elective diabetes-related admission for hypoglycaemic or hyperglycaemic disorders range from £816 to £3570.
Blood Glucose and Insulin Therapy	Improved self-management may result in reductions in hospital attendances and admissions.
Management of Complications	The following areas may require review locally to estimate if there are costs: Costs associated with psychological assessments and management. Estimated cost for a band 7 post is £43,000 at mid-point of scale. Provision of care within 24 hours by a by multidisciplinary foot care team. Provision of assessments tests and management of complications. For example microalbuminuria test costs £8, retinal screening £30 and electrocardiogram test costs £32.
Hospital & Emergencies	There may be costs locally to improve communication and training of healthcare professionals so that they can provide adequate inpatient services including education and psychological support to people with diabetes prior to discharge.

Further information relating to NICE guidance and the cost effectiveness of diabetes services can be found on the NICE NHS Evidence website.

The second Wanless report (2002) suggested that to implement the diabetes NSF further investment would be required, additional costs are primarily a result of expanded programmes to manage

diabetes complications and increase optimal glucose control. This financial cost, however, is partly offset by a reduction in hospital admissions of those with complications from diabetes. Assuming that the improved standards of quality in the NSF are fully implemented, this could save the health service over £200 million a year in 10 years' time[30].

Cost per quality of life adjusted life year (QALY)

The Wanless report also included a case study on diabetes, the report stated that based on the best available evidence the interventions known to be cost effective using £20,000 cost per quality of life adjusted life year (QALY) threshold are;

- Tight control of blood glucose and blood pressure for all diabetes
- ACE (angiotensin converting enzyme) inhibitors for those with diabetes with one other risk factor not otherwise quantified (for example tight control of blood pressure) and multiple risk factor management
- Retinopathy screening for all with diabetes and foot screening for all with diabetes and foot screening for those at high risk
- Self care including patient education

Recommendations	
18	Linked to the recommendations made in Section 8 and 9, the CCG and Public Health should work together to consider how to implement literature review evidence and consider links to any academic research to look at gathering better long term evidence on outcomes and cost effectiveness for diabetes care.

[30] Wanless, D (2002) Securing Our Future Health: Taking a Long Term View

11. Prevention

Type 1 diabetes is not considered preventable so this section focuses on interventions to reduce avoidable risk factors for type 2 and gestational diabetes.

There is not currently a specific diabetes prevention strategy in place in Solihull, or a strategic approach to diabetes prevention. There are services commissioned that aim to reduce the population prevalence of some of the avoidable risks associated with diabetes.

The Local Authority Public Health Team commission or financially support lifestyle services which address the risk factors listed:

Table 6: Table showing Commissioned or financially supported Lifestyles services

Risk factor	Commissioned service
High BMI	Obesity management service
	Public health nutrition
Physical inactivity	
	Wellbeing for young people through physical activity
	Community cricket
	Let's get physical (Street Games)
General lifestyle factors	Health trainers
	Health exchange
	NHS Health Checks

Health Checks

The NHS Health Check programme offers cardiovascular screening for people aged 40-74 who are not already on a disease register or treatment for cardiovascular disease or a related condition. The latest figures for Solihull practices show that nearly 10,475 people have had a health check since April 2013 (16.1%) and of these, 16 per cent had pre-diabetes, indicated by HbA1c between 42 and 47 mmol/mol[31].

[31] MSDi (2014)

Table 7: Health Checks activity in Solihull for 2013/14

Health Checks activity for 2013/14:	
Eligible patients	64948
Patients invited	20188
Patients screened	6691
Spend	£155507

Source: NHS Health Checks

Further analysis is required to examine the gap between the number of eligible patients and the numbers of patients screen to enable more targeted action to increase tack up as part of a diabetes strategy to improve early diagnosis and prevent of Type 2 diabetes.

Recommendations	
19.	Develop a strategic approach to prevention as part of a wider review of diabetes services; to include all relevant stakeholders to ensure a range of evidence-based and effective services
20.	Maximise the effectiveness of commissioned services with a prevention role by working with all stakeholders to increase service uptake including take up of health checks and retinal screening
21.	Co-ordinate and support a diabetes prevention campaign particularly targeted at risk groups and carers/wider families – taking a whole family approach

12. Structured Patient Education for Diabetes

NICE Guidelines recommend that structured education is available to all people with diabetes at the time of initial diagnosis and then as required on an on-going basis, based on formal, regular assessment of need[32]. Provision of diabetes education is a key intervention used locally to improve the quality of care in line with the NSF for Diabetes – standards 3 & 4.

In Birmingham structured patient education has evolved overtime commissioned by different NHS organisations, mainly the former Primary Care Trust. The aim of education for people with diabetes is to improve their knowledge and skills, enabling them to take control of their own condition and to integrate self-management into their daily lives.

Structured Diabetes Education Programmes

Education is considered a fundamental part of Diabetes Care[33] however; there is limited evidence about the effectiveness of structured education programmes to control diabetes or on the types of education that would be most effective to improve patient outcomes. It is also recognised that children and young people have different educational needs from adults. There are no evidenced based programmes for children and young people with diabetes[34].

The main types of diabetes education programmes currently commissioned by Solihull CCG include;

BERTIE: is a four week course for people with type 1 diabetes, which involves attending a 6-hour group education programme once a week for four consecutive weeks. The time between sessions is used for participants to put their newly-learned skills into practice.

DAFNE (Dose Adjustment for Normal Eating) Programme: Is aimed at patients with Type 1. DAFNE education aims to help people to manage Type 1 diabetes for adults and provides the skills necessary to estimate the carbohydrate in each meal and to inject the right dose of insulin.

DESMOND (Diabetes Education and Self Management for On-going and Newly Diagnosed): Is for patients with Type 2 Diabetes or at risk of Diabetes.

X-PERT Programme: The local X-PERT programme is group diabetes education programme aimed at people with Type 2 Diabetes. It provides patients with the chance to learn about treatments, to improve diabetes control, self-management and improve quality of life e.g. Lifestyles.

12.1 Structured Education programmes provided by ACUTE Trusts;

Table xx below shows the types of diabetes structured education that is available from acute trust NHS providers serving Solihull patients.

[32] NICE (2003) Guidance on the Use of Patient Education Models for Diabetes
[33] NICE (2003) Guidance on the Use of Patient Education Models for Diabetes
[34] DOH (2007) Making Every Young Person With Diabetes Matter

Table 8: Shows Type of Diabetes Structure Education programmes available in acute NHS Trusts

NHS Acute Trust Provider	Structured Education Programmes Offered	Venues
Birmingham Children's Hospital NHS Trust	• Diabetes Self-Management Education (DSME)	Provided to patients at the main hospital site
Heart of England Foundation Trust	• DAFNE • BERTIE • X-PERT	Diabetes and endocrinology centre at the Heartland Hospital & community venues
University Hospital Birmingham Foundation Trust	• DAFNE • DESMOND	Programmes are delivered at Nuffield House and some provide by the Primary Care Team

12.2 Diabetes Education Programmes provided in the Community;

DAFNE (Dose Adjustment for Normal Eating) Programme: Is provided by Solihull Community Health Care Trust various community venues across the borough. Eligibility is aged over 17 years, English speaking and diagnosed with type 1 diabetes for at least six month. Attendance is required on five full days.

X-PERT Programme: The local X-PERT programme is provided by Solihull Community Health Care Trust at various community venues across Birmingham. It is a six week (2½ hour session each week) group diabetes education programme aimed at people with Type 2 Diabetes.

Structured Diabetes Education:

12.3 Effectiveness of Structured Patient Education

There is no current available data on the effectiveness of Structured Diabetes education across Solihull and the extent to which it is meeting the needs of the population or improving patient outcomes. Data from the National Diabetes Audit 2012-13 suggests that there is significant variation in access and attendance for structured diabetes education for newly diagnosis diabetes patients, as well as all diabetes patients. Nationally, only 4.2 per cent of the 2,422,938 patients with diabetes in England were reported to have been offered structured education and of these only 1.49 per cent attended[35].

The NDA has collected data on structured education in England and Wales since 2005. NICE guidance recommend that people with diabetes (Type 1 or Type 2) be offered patient education programmes, officially known as 'structured education'.

The NDA reports whether there is a record that a person with diabetes has been offered or has attended structured education. The analyses in the table below consider structured education records in 2012-2013 for patients diagnosed in the same period.

[35] HSCIC (2013) National Diabetes Audit 2011-2012, Report 1 Care Processes & Treatment Targets

In 2013, the CCG outcome indicator set will report indicator C2.5 'People with diabetes diagnosed less than one year, referred to structured education.' This indicator will use a similar construction to the information presented below but will use diagnosis date (rather than year), which is currently unavailable for analysis, to define patients diagnosed less than a year.

Table 10: Uptake of structured education for people newly diagnosed with diabetes in NHS Solihull CCG compared with England and Wales, 2012-13

			Number diagnosed	Offered	Attended	Offered or attended[a]
All diabetes[b]	*n*	Solihull	1,092	40	7	47
		England & Wales	196,675	31,336	6,740	36,270
	%	Solihull	*n/a*	*3.7%*	*0.6%*	*4.3%*
		England & Wales	*n/a*	*15.9%*	*3.4%*	*18.4%*
Type 1	*n*	Solihull	37	0	0	0
		England & Wales	6,847	264	60	320
	%	Solihull	*n/a*	*0.0%*	*0.0%*	*0.0%*
		England & Wales	*n/a*	*3.9%*	*0.9%*	*4.7%*
Type 2	*n*	Solihull	1038	40	7	47
		England & Wales	182,045	30,409	6,569	35,201
	%	Solihull	*n/a*	*3.9%*	*0.7%*	*4.5%*
		England & Wales	*n/a*	*16.7%*	*3.6%*	*19.3%*

[a] Due to issues with data quality, a patient may be recorded as attending structured education without it recorded as being offered to them; the offered or attended column, which is included in this table, gives an indication of the scale of this issue.
[b] All diabetes includes maturity onset diabetes of the young (MODY), other specified diabetes and not specified diabetes.
* To protect patient confidentiality, numbers between 1 and 5, as well as their corresponding percentage values, have been replaced with "*" (an asterisk). Secondary suppression has also been used in cases where data could be identified.

In common with many CCGs, this data highlights that Solihull is performing poorly in terms of structured education, yet this is something that is fundamental to effective patient self-care. It must be determined whether these poor results are due to recording issues or whether there really is a CCG wide deficit in structured education.

There is nationally evidence that suggest that investment in structured education alongside clinical care can deliver significant cost savings for patients with Type 2 diabetes and in four to five years for patients with Type 1 diabetes[36]. Nationally it is estimated that patient education may costs on average £66 per patient offered over three afternoons or up to £545 per patient for DAFNE course[37].

With prevalence of Diabetes increasing in Solihull and its distribution across at risk populations it suggests that an in depth review of structured patient education would provide some short and medium term evidence to inform future commissioning of diabetes services in the Borough. This should include data from providers on the numbers of diabetes patients offered and that attend structured education. A good quality long term study would provide more robust data to support

[36] Diabetes UK (2013) State of the Nation
[37] NICE (2003) Guidance on the Use of Patient Education Models for Diabetes

greater investment in developing a self-care model – patient education for Solihull. This should include exploring commissioning a wide variety of ways that patients can access patient education and encourage greater take up, using different learning methods.

Gaps

- No structured education programmes for children & young people available in the community
- Gap in variety of programmes offered particularly those aimed at ethnic minority populations or housebound patients

Recommendations	
22.	Carryout a review of structured education to analysis the extent to which they are meeting patient needs and improving patient outcomes to inform future commissioning

13. Patient Experience & Involvement

With increasing numbers of people experiencing diabetes it is critical that commissioners fully understand the experiences of patients and ensure they secure meaningful public involvement in decisions about how these services can meet local needs. There are significant drivers both nationally and locally to ensure better involvement of patients and the public in key decisions about changes to health and social care services. This includes enabling individuals to have more of a say in their own care, involving people in the planning and improvement of local services and engaging communities in health and public health.

13.1 Policy Context

The key policy framework for engagement and Involvement is as follows;

- **Section 138 of the Local Government and Public Involvement in Health Act** (2009) - It imposes a duty on all local authorities and best value authorities to involve local representatives when carrying out 'any of its functions' by providing information, consulting or 'involving in another
- ***Liberating the NHS: No Decision About Me Without Me*** (2010) - **CCGs** have a duty to promote individual patient involvement in the form of shared decision-making with patients (and their carers and representatives) about their own care.
- ***Health & Social Care Act*** **(2012)** - places a duty on CCGs to make arrangements to secure public involvement and consultation
- ***Everyone Counts: Planning for Patients*** *(2012)* outlines the incentives and levers that will be used to improve services from April 2013, the first year of the new NHS, where improvement is driven by clinical commissioners
- ***NHS Constitution*** **(2013)** CCGs will have a general duty to promote the NHS Constitution in the exercise of their functions and to act both so as to ensure that health services are provided in a way which promotes the NHS Constitution, and so as to promote awareness of the Constitution among patient's staff and the public

In addition to these the ***National Frame Work for Diabetes***: **Standard 3** states that;

All children, young people and adults will receive a service which encourages partnership in decision making, supports them in managing their diabetes and helps them to adopt and maintain a healthy lifestyle. This will be reflected in an agreed and shared care plan in an appropriate format and language. Where appropriate, parents, and carers should be fully engaged in this process

13.2 National Patient Surveys & Data

Data on patient experience is available in national survey reports and will be included from 2014 in the National Diabetes Audit.

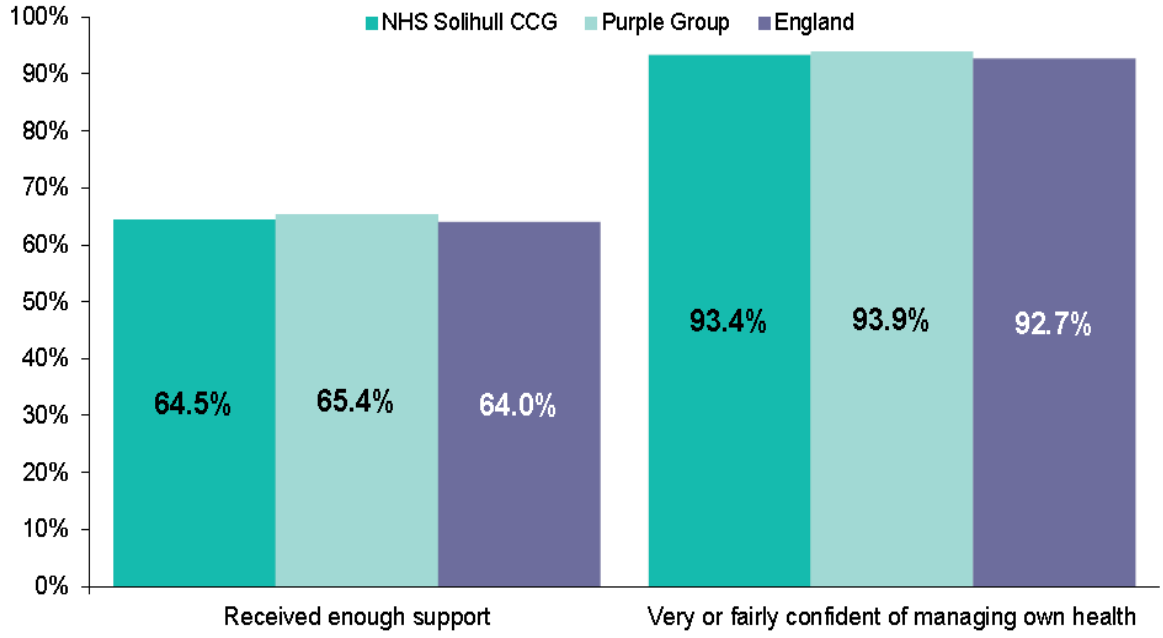
National Survey of People with Diabetes (2007) - this survey formed part of the Healthcare Commission's National Patient Experience Survey Programme. This was the first survey to focus on people with diabetes, and is the largest survey of its kind in the world. The survey included all 152

PCTs in England. Questionnaires were returned by 68,501 people with diabetes – a response rate of 55 per cent.

The Patient Experience of Diabetes Services (PEDS) Survey - will measure the diabetes healthcare experiences of people with diabetes in England and Wales. Commissioners will be analysis this data to better understand patient experience as compared to provides reported outcomes.

GP Survey - Part of the survey under managing your health provides some general data about patient experiencing about management of long term conditions. Data below shows the percentage of people who felt in the last 6 months they had enough support from local services or organisations to help manage long term condition(s) across Solihull CCG compared to the England average.

Figure 42: Proportion of patients in 2013-14 who felt they had enough support from local services to help manage their long-term conditions-Solihull and nationally



Source: GP Patient Survey 2013

NHS Choices Transparency **Data** – NHS England have made available to the public through NHS Choices the information that the health care system uses to understand how well it is performing or that patients need to make decisions. This includes CCG, GP Practice or Hospital level data to look at patient experience, patient safety and outcomes; this includes data on Diabetes Type 1 and 2 by NHS provider service.

Data is available on NHS Choices at; http://www.nhs.uk/Service-Search/Accountability

13.2. Patient Experience & Involvement in diabetes care in Solihull

Patient perspectives on diabetes care: How this is carried out in Solihull

Other mechanism for local patient or citizen involvement in Solihull include:

Health & Wellbeing

Health & Wellbeing Boards have a statutory duty to ensure involve in undertaking a Joint Strategic Needs Assessment (JSNA) and pharmaceutical needs assessment.

HealthWatch Solihull

Healthwatch was established on the 1st April 2013. It is the new independent consumer champion that is proving a platform for local voices to influence delivery and design health and social care services. Healthwatch also provides a complaint advocacy service and Enter and View which will potential provide opportunities and intelligence to commissioners around the experience of people with diabetes and their families.

Recently, Healthwatch Birmingham launched a new digital tool to make it easier for people to leave feedback about their experiences of local services. The web based tool is available in a variety of languages and other functions to increase accessibility.

http://healthwatchsolihull.org.uk/services/

In addition to this feedback tool people can also register views on Patient Opinion and NHS Choice's. The three data sources can provide CCGs with data on patient experience and views on local diabetes services.

13.3. Patient Disease Specific Groups in Solihull

There is no diabetes network within Solihull that brings together commissioners and patient/interest groups. This is a key issue that commissioners will need to consider going forward to develop an integrated patient centred diabetes model within the borough

Diabetes UK has a Solihull group

Recommendations	
23.	Develop an annual process for commissioners and patients to review together results from the future Diabetes Patient Survey and any other patient experience data
24.	CCGs should undertake a patient and public engagement exercise around diabetes to review existing services and to develop in partnership any new models of care; this must include targeted engagement with at risk groups.
25.	Ensure information is available to the public following the Diabetes HNA and about CCG's agreed priorities to improve Diabetes services/outcomes

14. Conclusion

Prevalence of diabetes is set to increase in Solihull and this will add a further challenge in terms of managing resources to meet the needs of patients. It is clear that more needs to be done to improve diagnosis of diabetes and create better awareness across Solihull of the risk factors. Developing a Solihull strategic approach to prevention should be a priority. As well as improving management of diabetes and reducing avoidable complications, this is a complex task but should be prioritised across agencies to develop high quality and patient focused services.

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