Diabetes Service Specification

Original Template from the National Clinical Director for Diabetes 2015
Adapted through the
Diabetes Expert Advisory Group NHS England (West Midlands) and
Diabetes Care Conference (West Midlands SCN) 2016

Document Title: Diabetes Service Specification

Version number: 1

First published: January 2016, Final April 2016

Updated: (only if this is applicable)

Prepared by: Dr Jonathan Valabhji

Sponsored by Dr Kiran Patel

Edited and adapted by: Dr V Patel/ V Millward

Classification: (Final)

The National Health Service Commissioning Board was established on 1 October 2012 as an executive non-departmental public body. Since 1 April 2013, the National Health Service Commissioning Board has used the name NHS England for operational purposes.

Forward

The West Midlands has a considerable healthcare problem due to diabetes. We have a higher than national average prevalence of diabetes mellitus. There are 346,339 registered patients with diabetes out of a reported population of 4.76 million. The prevalence is therefore 7.28%, whilst nationally the England prevalence is high but only 6.37%. Of concern is the fact that the rate of increase in the prevalence of diabetes over the last 3 years was 34.9% higher than in England as a whole. Achievement of the 3 main diabetes care targets is excellent in some areas in the areas within the region reaching 45.1% of patients in some areas but only achieving 29.5% of patients in other areas. The rate of foot amputation shows considerable variation with 55% increase in some areas versus a reduced rate by 40% elsewhere in the region. This variation in outcomes needs to be addressed urgently towards better outcomes.

The current spend on Diabetes care within the region is close to 1 billion pounds based on the estimate that 10% of the National NHS budget is spent on diabetes care. Most of this is due to the complications of diabetes and hospital admissions.

The most important consideration is that people living with diabetes are at high risk of cardiovascular and other complications with a shorter than expected lifespan. It is to improve the life experience of these people and to reduce the morbidity and mortality due to diabetes that all our effects must be addressed. NHS England and West Midlands Clinical Networks have developed a set of standards to facilitate the long term care and reduction of complications. We are committed to understanding our population's needs to enable the delivery of quality information, guidance and sustainable pathways of care to those requiring intervention.

Through collaboration with community and primary care professionals, Hospital based specialists and commissioning teams, it is our intention that we will provide high standard quality and equitable care across the region. This document responds directly to the NHS England prevention agenda as part of the Five year forward view (FYFV); specifically the New Models of Care, supports the Sustainability and Transformation Plans (STP) as a key priority for sustainable transformation and addresses the six principles developed by the People and Communities 5YFV Board.

Through the development of assurance frameworks and quality standards, we have the opportunity to achieve greater alignment and coherence between programmes and priorities and bring together local health economies to collaborate and provide seamless care. This is for our population at risk of developing type 2 diabetes and for our patients who live with either type 1 or type 2 diabetes, every day of their lives. It is our intention to ensure our population can and will access first rate care now and in the future.

Dr Kiran Patel: Medical Director
Dr Vinod Patel: Strategic Clinical Network, Clinical Director for Diabetes

NHS England (West Midlands)

Contents

Executive Summary

Diabetes is a significant public health concern; it is known to affect approximately 3.2 million[1] people in the UK and those individuals are at significantly increased risk of developing heart disease, stroke and renal disease. This service specification outlines the provision of high quality care for all those with diabetes, and differentiates the care needs of those with Type 1 diabetes mellitus (T1DM) from those with Type 2 diabetes mellitus (T2DM) where those care needs differ.

The model of care detailed within this specification divides the care pathway into several broad elements which should all be closely integrated and working effectively with each other: Preventative care, Self-care, Generalist care and Specialist care and gives guidance on the use of the Portsmouth Super 6 to evaluate the educational needs of primary care providers in diabetes care such that only 6 main categories of patients are routinely referred to secondary care. Clearly local referral criteria will always depend on *local* expertise.

The ideal service provision will therefore span primary, community, secondary, mental health and social care. As such it will require the commissioners responsible for these different sectors to collaborate. We hope that this document will inform commissioners, patients and clinicians about models of care that could be used in their locality. It should adapted locally to provide excellence in Diabetes Care. The broad principles in this document will be application to all diabetes care services as they are firmly grounded in the aspirations of the NHS 5 Year Forward View, NHS Diabetes Documents and NICE Guidelines on prevention of diabetes and care of the person with type 1 or type 2 diabetes. The example service specifications within this document have been formatted into an example service structure based on examples of best practice currently available.

1 Introduction

Diabetes is a significant public health concern; it is known to affect approximately 3.2 million[1] people in the UK and those individuals are at significantly increased risk of developing heart disease, stroke and renal disease. In the under 75 age group type 2 diabetes can be prevented in at least 80% of cases and if managed well, complications can be reduced by more than 50% resulting in extended life expectancy and a reduction in complications such as cardiovascular disease, renal disease and diabetic eye disease all of which have considerable morbidity and expensive healthcare attached to them. This specification has been created to assist healthcare professionals to adopt an integrated approach to diabetes which streamlines coordinated management across primary, secondary and, most important of all, self-care. It is hoped that implementation of these ideas will lead to earlier and more aggressive prevention

and intervention, more timely referral to secondary services and as a result an overall improvement in health outcomes for these individuals. The very real financial benefits would be seen in the short, medium and longer term. This would be in relation to cost-efficient care and prevention of costly interventions such as in CVD care, foot care and renal replacement.

2 The Diabetes Service Specification

This service specification outlines the provision of high quality care for all those with diabetes, and differentiates the care needs of those with Type 1 diabetes mellitus (T1DM) from those with Type 2 diabetes mellitus (T2DM) where those care needs differ. It details the entire care pathway for people with diabetes, including those with the long-term complications of diabetes, according to the NICE Quality Standard (Appendix A). However the two elements must be integrated across the community to ensure high quality diabetes care for the population it serves.

Themes that run through all elements are: Education, Equitable Access and Implementation of cost efficient evidence based diabetes care pathways. The model of care detailed within this specification divides the care pathway into several broad elements which should all be closely integrated and working effectively with each other:

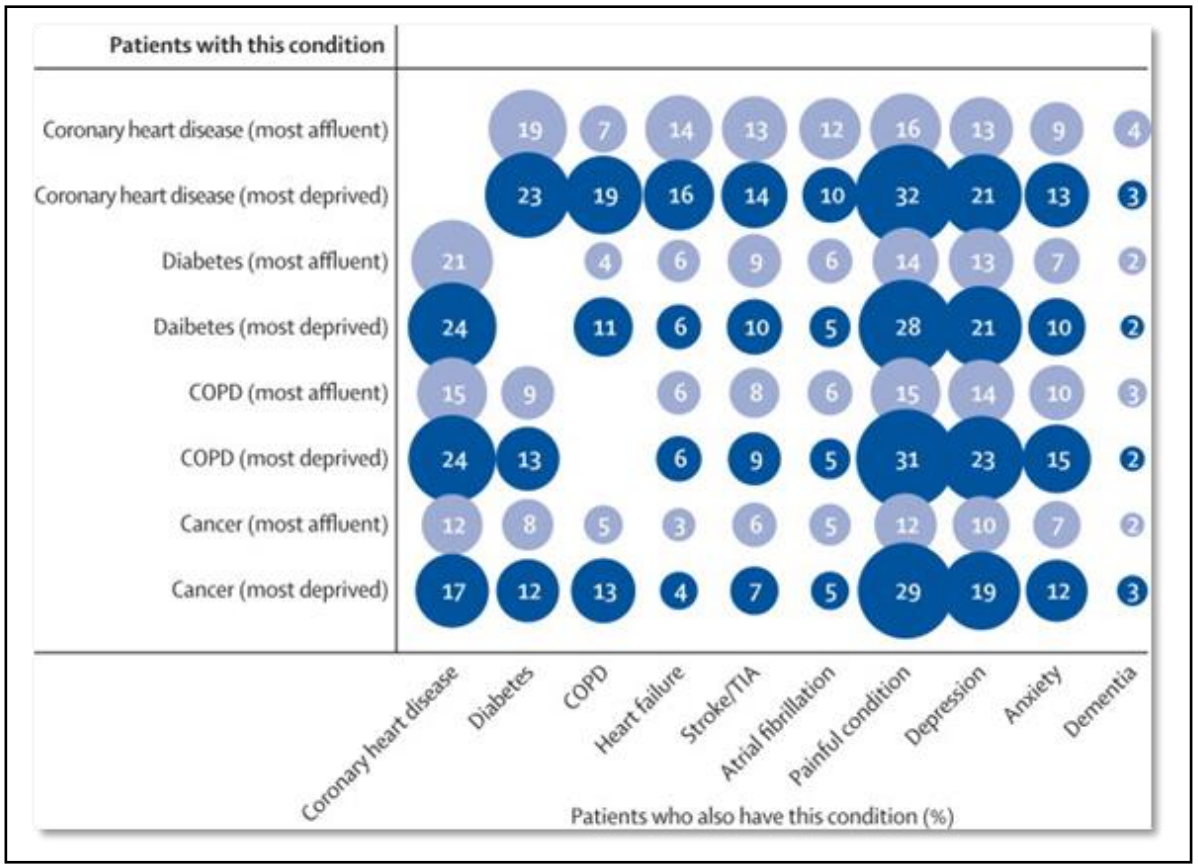
- Self-care
- Generalist care
- Specialist care.
- Preventative care

Local developments of these ideas could, for example, lead to a community based multidisciplinary team that interfaces between general practice-based and specialist services. There are important groups of health care professionals that are not currently actively engaged in diabetes care, not from lack of interest or expertise, but due to them not being incorporated into diabetes care pathways. The particular group of health care professionals that could strengthen diabetes care in most localities would be community pharmacists. It is therefore important that CCGs engage in training and incorporating community pharmacist into the day to day care of patients with diabetes.

A longer term vision for the future for our patients, the local community and the training in diabetes skills is essential. Currently it is estimated that the NHS spends around 10% of its budget (this equates to more than £10 billion) on diabetes. It is the complications of diabetes that accounts for 80% of this total spend. Diabetes care, overall, therefore has to have two main remits: prevention of diabetes itself and prevention of complications of diabetes. It must be stated that type 1 diabetes is not preventable but that the prevention of complications is even

more important in this group of patients with diabetes as they lose, on average, 10 years of life due to complications.

Fig 1 Prevalence of Co-morbidities [1]. **(Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study** Barnett, Karen et al. The Lancet , Volume 380 , Issue 9836 , 37 - 43)



Within this challenge is the fact that while excellent diabetes care today will avoid the development of the long term complications of diabetes in the future, many people are already living with the microvascular and macrovascular complications of diabetes, such as blindness, kidney failure or heart disease. People with diabetes may also have one or a number of other long-term conditions, such as chronic obstructive pulmonary disease (COPD), anxiety or depression. The challenge for the NHS in England is to deliver high quality holistic care to all such individuals. The figure 1 below shows the prevalence of co-morbidities in patients with diabetes and indeed other long term conditions.

Self-management, based on personalized care planning and the effective delivery of structured education, and person empowerment, are central to the way in which outcomes can be optimised for people with diabetes and other long-term conditions. The individual, and often their care, must be the starting point for any decisions about their care. Peer support is

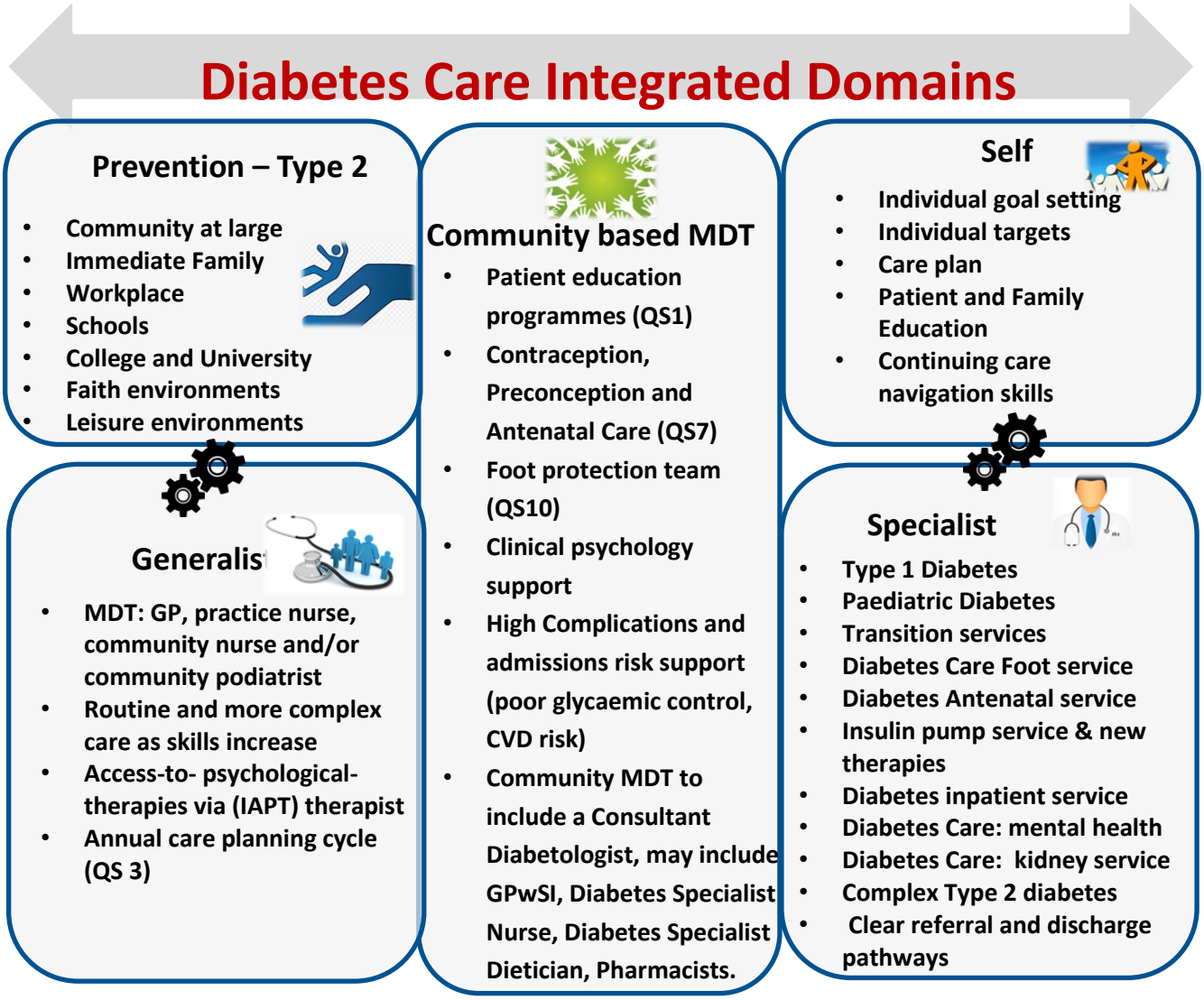
recognised as an important part of self-care and engagement through social media and support groups in localities should be signposted.

This service specification comprehensively addresses management of diabetes as set out in the NICE Quality Standards, and provides an example of how the generalist and specialist care needs of individuals can be successfully integrated. The NICE quality standards are listed in the table below.

	NICE Diabetes Care Quality Standards Statements 2016
1	**Structured Education:** People with diabetes and/or their carers receive a structured educational programme that fulfils the nationally agreed criteriafrom the time of diagnosis, with annual review and access to ongoing education.
2	**Nutrition and Physical Activity Advice:** People with diabetes receive personalised advice on nutrition and physical activity from an appropriately trained healthcare professional or as part of a structured educational programme.
3	**Annual Care Planning:** People with diabetes participate in annual care planning which leads to documented agreed goals and an action plan.
4	**Personalised HbA1c target:** People with diabetes agree with their healthcare professional a documented personalised HbA_{1c} target, usually between 48 mmol/mol and 58 mmol/mol (6.5% and 7.5%), and receive an ongoing review of treatment to minimise hypoglycaemia.
5	**BP, lipids and blood glucose medication in accordance with NICE guidance:** People with diabetes agree with their healthcare professional to start, review and stop medications to lower blood glucose, blood pressure and blood lipids in accordance with NICE guidance.
6	**Insulin treatment with structured programme and dose titration by patient:** Trained healthcare professionals initiate and manage therapy with insulin within a structured programme that includes dose titration by the person with diabetes.
7	**Pre-conception care and Contraceptive advice:** Women of childbearing age with diabetes are regularly informed of the benefits of preconception glycaemic control and of any risks, including medication that may harm an unborn child. Women with diabetes planning a pregnancy are offered preconception care and those not planning a pregnancy are offered advice on contraception.
8	**Annual assessment for complications:** People with diabetes receive an annual assessment for the risk and presence of the complications of diabetes, and these are managed appropriately.
9	**Psychological assessment:** People with diabetes are assessed for psychological problems, which are then managed appropriately.
10	**Foot Protection Team Service:** People with diabetes at risk of foot ulceration receive regular review by a foot protection team in accordance with NICE guidance.
11	**MDT Foot Care Team:** People with diabetes with a foot problem requiring urgent medical attention are referred to and treated by a multidisciplinary foot care team within 24 hours.
12	**Diabetes Care in Hospitals:** People with diabetes admitted to hospital are cared for by appropriately trained staff, provided with access to a specialist diabetes team, and given the choice of self- monitoring and managing their own insulin.
13	**DKA Care:** People admitted to hospital with diabetic ketoacidosis receive educational and psychological support prior to discharge and are followed up by a specialist diabetes team.
14	**Hypoglycaemia specialist care:** People with diabetes who have experienced hypoglycaemia requiring medical attention are referred to a specialist diabetes and treatment reviewed.

The overall design and concepts are encapsulated in the diagram below.

Fig 2 Diabetes Care: Integrated Domains



Areas that could be improved for the West Midlands could include care delivered by local pharmacists and family and carers. The delivery of education programmes could be closer to home in local schools and colleges. It has been suggested within the regional West Midlands Diabetes conference which had a wide range of stakeholders in diabetes care, that there should be a diabetes care 'accountable officer' within each CCG whose main remit would be;

- Ensure high standards of diabetes prevention programme
- Ensure high standards for diabetes care based on national standards

  Ensure continuity of care across health and social acre

  Ensure cost efficient evidence based care

In terms of training, this should be accredited and this could be locally or regionally.
Integrated care has to be of uniformly high standard to achieve the outcomes we desire in terms of reducing complications, hospital admissions and improving patient experience.

Central to our vision for diabetes care is sharing best practice NHS West Midlands will facilitate this through the annual conference regional workshops and collate best practice materials onto the shared portal on the SCN website.

There will be a particular focus on evidence based practice and improving communication with patients through care plans and training basic training programmes and materials. It is clear that patients with diabetes have a great deal of difficulty attending education programmes even though they are usually 4 to 6 times over a 1 to 3 month period. We will endeavour to create more basic programmes with a focus on patient's safety and reduction of complications of diabetes that have a higher uptake. We would stipulate that all pts with type 2 diabetes are warned of the high risk of diabetes developing in their close family members. This would lead to basic information being provided on what people can do to prevent diabetes.

2.1 The exemplar care pathway outlined in this specification.

Care delivery is based on a multidisciplinary approach whether the care setting is the GP practice, a community center, or a hospital. The example illustrates a community based multidisciplinary team (MDT) at the interface between generalist practice based care and specialist care. The community based multidisciplinary team can support delivery of parts of the pathway that could not be delivered in every GP practice – an example could be delivery of structured education. Such teams should be innovatively exploring ways of generalists and specialists working together in the community using information technology and new technologies to ensure patient care is delivered in an appropriate setting local to the patient when possible. They need to have strong networking links and channels of communication with generalist and specialist colleagues working in the hospital and community. In most commissioning groups improving links with ambulance services, district nurses, nursing homes could result in reduction in admissions due to decompensated diabetes. This will be in conditions hypoglycemia, diabetic ketoacidosis, leg ulcers, cellulitis and other diabetes complications.

2.2 The model of service provision

In the model described, the generalist GP practice based service will have primary responsibility for the person with diabetes. Specialist services and the community based MDT will have responsibility for the episodes of care provided in those settings. However, accountability for the incidence of onset of complications and incidence of hard clinical endpoints such as amputation and blindness across the health economy should be shared by all providers of diabetes care. Therefore both generalist and specialist services will be jointly accountable for clinical outcomes. The NHS standard contract is used for secondary healthcare not primary healthcare services, however, this contract can be used for local enhanced services.

The community based MDT could act as the link between generalist clinicians and hospital-based specialists by representing both. Hospital-based specialists, who provide the specialist diabetes service, should spend a proportion of their time in the community advising and facilitating the work of the community based MDT. The presence of specialists in the MDT will facilitate fast-tracking of complications once diagnosed up to appropriate specialist settings and allow the team to provide more routine aspects of specialist care closer to the patient's home. Examples of services that can be delivered by the community based MDT include:

1. Education for prevention of those at risk of diabetes in relation to lifestyle
2. Structured education for those with Type 2 diabetes, for people whose GP practice does not provide this in-house.
3. Structured education for those with Type 1 diabetes
4. Type 2 diabetes with poor glycaemic control despite best efforts in primary care
5. Pregnancy advice for women of childbearing age
6. Type 1 diabetes care when the MDT includes a Consultant Dialectologist
7. Clinical psychology support within the MDT environment for those with depression and anxiety that is related to their diabetes.
8. Medicines optimisation; optimising patient adherence and outcomes, prevention of complications, patient safety and cost efficiency.

All people with T1DM will have access to specialist services if they so choose, given the relative rarity and complexity of Type 1 diabetes and the associated specific care needs. People with other forms of diabetes, such as monogenic diabetes (e.g. maturity-onset diabetes of the young (MODY), mitochondrial diabetes), diabetes due to chronic pancreatitis or total pancreatectomy, will also have access to specialist services given their specific care needs.

A small number of specialised services are commissioned by NHS England directly as part of NHS England's specialised commissioning role. These services include islet cell transplantation services, pancreas transplantation services, insulin-resistant diabetes services, congenital hyperinsulinism services, Alstrom Syndrome services, Bardet-Biedl Syndromes services and Wolfram Syndrome services, and will be delivered by tertiary centres that specialize in these specific conditions. Service specifications for these specialized services will not be covered here, but are included in the work streams of the Diabetes Specialised Commissioning Clinical Reference Group at NHS England.

For the purposes of this specification the providers of specialist care have the following designated responsibilities:

1. Provision of transition diabetes service (ages 13-25 years)
2. Provision of diabetic foot service (*see NICE support for commissioning foot care services)*
3. Provision of diabetic antenatal service
4. Provision of diabetic kidney service, prior to renal replacement therapy
5. Provision of T1DM service, including insulin pump service (*see NICE support for commissioning insulin pumps)*
6. Provision of diabetic inpatient service
7. Provision of diabetic mental health service
8. Provision of a diagnostic service where there is doubt as to the type of diabetes – if there is difficulty differentiating Type 1 from Type 2 diabetes, or if a rarer form of diabetes, such as MODY or mitochondrial diabetes, is suspected.

There may be additional services provided by the specialist provider, depending on local requirement that are not covered by this service specification. There will also be additional services that contribute to comprehensive diabetes care, that are dealt with through broader population based contracted services, such as ophthalmology/medical retinal services and retinal screening services. Where this is the case, it is however important that such services are still integrated within the diabetes care pathways – for example, that the recognition of significant diabetic retinopathy is associated with greater input and efforts to improve glycaemic and blood pressure control by diabetes care pathway generalists and/or specialists as appropriate. It is also important to ensure that the number screening positive with retinal screening is matched by appropriate capacity in ophthalmology/medical retinal services, even if such services are not included within the diabetes service specification.

The terms specialist services and community MDT services in this specification have been used to encompass those services that it could reasonably be considered would be commissioned by the CCG. Local discussions between the current care providers will help to establish the specific local criteria, and any additional designated responsibilities for the providers. The Portsmouth Super 6 can be used to evaluate the educational needs of primary care providers in diabetes care such that only 6 main categories of patients are routinely referred to secondary care these are.

(1) Inpatient diabetes*
- To optimise control and safe/early discharge

(2) Foot diabetes (predefined criteria)*
- Foot Ulceration, Charcot, Necrobiosis

(3) Type 1 DM, all adolescents*
- All new Type 1 Diabetes patients

(4) Insulin Pump services*
- Insulin Pump Care
- New Therapies eg GLP-injectables + insulin

(5) Low eGFR/renal dialysis*
- Creatinine > 150 umol/l or CKD 3
- Proteinuria 1+ or greater
- Optimise risk factors then renal referral

(6) Antenatal diabetes*
- Any diabetes patient or Gestational DM
- Pre-conception Care: asap much neglected

All models of diabetes care are reliant on the seamless integration of generalist and specialist services. To achieve this it will be essential that patient records are integrated - and wherever possible shared or owned by the person with diabetes - and the two elements have good communication mechanisms to allow for continuity of care. Integration can be further supported by formal arrangements for specialists to support generalists through:

- Email advice e.g. a specified 1 working day turn-around for email advice
- Telephone contact support e.g. a dedicated daily time window for taking calls for advice.

For older people, many of whom will have complications of diabetes and hence will have multiple comorbidities and may also suffer frailty; there will need to be co-ordination of health and social care.

2.3 Competency of health care professionals and continuous professional development

The Provider must ensure that all staff involved in designing and delivering the service are trained in line with any national/professional recommendations and curricula to achieve key competencies that have been identified in their Job Role to deliver appropriate diabetes care. The Provider must make available time in job plans and resources to support relevant

Initial, and then continuous professional development for all staff contributing to the diabetes clinical pathway. This is crucial as many services are being redefined and delivered in different settings and members of the MDT may take on new responsibilities. This provides an opportunity to foster further interaction between generalists and specialists. The Provider must ensure that diabetes specialist physicians, nurses, dieticians, podiatrist, pharmacist and psychologist members of the MDT provide continuing diabetes-specific education to members of the generalist teams. These specialist members of the MDT can also provide support, advice and mentorship in diabetes management to members of the generalist teams. The SCN website will be a resource hub for guidelines that are working well for both primary and secondary care. Within the region we are confident that we will have high standards of training materials for most areas of diabetes acre. We are confident that most diabetes care teams will be happy to share basic guidance across that region. A simple example of this is appendix x which is the 1 page diabetes care guidelines and referral criteria from a local NHS Trust.

2.4 Commissioning

The ideal service provision will therefore span primary, community, secondary, mental health and social care. As such it will require the commissioners responsible for these different sectors to collaborate (CCGs, Local Authorities and NHS England Area Teams). It may also require different CCGs to work together across a broader geographical area to commission diabetes services. National financial data suggest that 10% of the NHS budget is spent on diabetes. Yet there are few if any good examples of joint working to accurately determine exactly where the monies are being spent and where savings and cost-efficiencies can be made. Although only around 11% of the diabetes budget is spent on diabetes there is some potential to save money by using drugs, if clinically near identical in terms of efficacy, that are lowest acquisition cost within drug groups or therapeutic class (such as glucose monitoring strips or insulin pump devices). Commissioning of this specification would be facilitated by the development of an integrated commissioning model, which would allow for joint commissioning of the full pathway. Regardless of the commissioning environment, it is expected that all

elements of care will be available for people with diabetes and that commissioners will work with patients, carers and providers to identify measurable outcomes for which service providers of diabetes care will be held jointly accountable. A goal should be shared responsibility and accountability by all providers for the incidence of onset of complications and incidence of hard clinical endpoints such as amputation, blindness, myocardial infarction and stroke for all those with diabetes in the population served.

3 The Diabetes Matrix: Diabetes Care from Prevention, early diagnosis, optimized care to EOL Care

There are many models of diabetes care such as the Kaiser Permanente Model which set out a vision of care where prevention is better than more expensive care downstream. The Diabetes Matrix model of care was developed with Dr Kesh Siddhu (previous West Midlands SHA Deputy Director of Public Health and Dr Kathleen Baillie (Public Health Junior Doctor). It is useful in that the totality of diabetes care is divided into distinct domain of care that can then be audited for quality. A high quality of care in the higher levels (eg Level 1-2) would result in significant reductions in morbidity and mortality and costs.

Fig 3 Diabetes Assurance Framework

Diabetes Assurance Framework			
Interventions	**Target Group**	**Recommendations**	**Nice Quality Standards**
Level 1 — Community Prevention	Entire local population.	Primary Care to promote healthy lifestlye choices using available resources eg. MECC, Change 4 life.	Statement 1
Level 2 Pre-diabetes Screening	At risk groups identified within local population.	Screen at risk individuals using HbA1c testing and target those most likely to benefit from lifestyle intervention.	Statement 1
Level 3 Early Diagnosis	Pre-diabetes/known impaired glucose tolerance/ newly diagnosed diabetics.	Primary Care to treat and monitor those with pre-diabetes for signs of diabetes to aid early diagnosis. Screen for Cardiovascular risk.	Statement 1 & 2
Level 4 Forging Foundations	Newly diagnosed diabetes or known diabetes new to a practice.	GPs to see all newly diagnosed patients and collaborate with patient to create individualised care plan following NICE guidelines on best practice.	Statement 2
Level 5 Rolling Review	All diabetes pts registered with a practice. **5a.** Well controlled patients with few or no risk factors. **5b.** Complicated or high risk patients with medical, pshychological and/or social issues affecting engagement with services.	Primary Care to review well controlled patients at least annually, to include eye/foot and renall screening with interim HbA1c monitoring and medication review as necessary. GPs to target complicated patients and not attenders directly.	Statement 3, 4, 5 & 6
Level 6 Early Escalation	Diabetes pts with uncontrolled co-morbidities, poor diabetic control and or ongoing high risk behaviour.	GP to commence treatment for uncontrolled risk factors and consider specialist referral for these or for diabetic specialist care if necessary.	Statement 7 & 8
Level 7 Curbing Complications	All diabetes pts registered with practice. **7a.** Patients with known or forseeable complications to be planned for eg. Pregnancy, concurrent illness/disease. **7b.** Patients with complications arising in an unpredicatble manner as a result of their disease.	GPs to refer to and collaborate with other specialists to plan for forseeable events and to review with specialist input, treatment and ongoing management for less predictable complications.	Statement 9, 10,11 &14
Level 8 Avoidable Admissions	Diabetes pts on insulin and other complex regimes Patients with known foot ulcers. Patients at risk of self neglect.	GPs and Practice nurses to ensure patients suitably educated on and coping with the administration of their medications. Good community Foot at Risk programs in place. Social support implemented at earliest opportunity where required.	Statement 10 & 11
Level 9 Unavoidable Admissions	Patients with advanced disease and/or multiple risk factors/co-morbidities. Eg. Heart disease, retinopathy, nephropathy.	GPs to ensure there is strong collaboration with other specialties to ensure consistant, ongoing, good quality, shared care.	Statement 12 & 13
Level 10 Rationalised Long Term Care	Patients with cancer/ terminal illness, severe physical/mental disabilty, the frail elderly.	GPs to rationalise the agressiveness of treatment in light of other ongoing health issues and to discuss this with the patient and where appropriate the family to co-ordinate a level of care acceptable to all.	Statement 9,12& 14

Level 1 - Community Prevention

The best treatment is prevention. Public health services have invested a great deal in the promotion of healthy lifestyle and diet choices. These ideas are applicable to a great number of clinical conditions but are especially relevant to diabetes as there is overwhelming evidence for the benefits of healthy diet and lifestyle practices in the prevention and management of diabetes[*]. GPs and PCTs should be aware of and make good use of the resources available when discussing modifiable risk factors with their patients. These include the HEALTH passport[*] and Change for Life.[*] Individuals who are overweight, smoke, belong to high risk ethnic groups, have hypertension, ischaemic heart disease or a family history of diabetes should be particularly targeted and a diabetes risk score undertaken.

Level 2 - Pre-diabetic Screening

Individuals who have been identified as at risk on an ad hoc basis or through community screening typically undergo fasting blood glucose and, if indicated, a glucose tolerance test (current gold standard for diagnosis). Those individuals who demonstrate impaired glucose tolerance are prime candidates for targeted diet and lifestyle intervention. In 58% of these individuals diabetes can be prevented through weight management, healthy diet and exercise[*]. The HbA1c, previously used as a marker of diabetic control, is soon to be introduced as a screening marker which will make identification of high risk individuals simpler.[*] However it should be used in addition to, rather than in place of, clinical knowledge and judgment of at risk groups.

Level 3—Early Diagnosis

The earlier we diagnose diabetes the sooner we can begin treatment and prevent irreversible damage. Pre-diabetic patients or at risk individuals should be reviewed by their GP/practice nurse on a regular basis for signs of the development of diabetes. The importance of diet and lifestyle factors should be reiterated throughout. Newly diagnosed diabetics should be screened for cardiovascular disease risk at the earliest available opportunity and then enrolled in a scheme as outlined in level 4.

Level 4 - Forging foundations

Each person with diabetes should undergo an initial assessment program in primary care during which relationships with their GP and practice nurse are forged. Care plans individualized to the patient following the ‘Year of Care’ approach’ should be implemented and

treatment initiated following best practice (NICE guidelines* and National Service Framework*). Patient education at this stage is paramount as a good understanding of their illness and the control they can exert on its progression is key in reducing the likelihood and severity of long term complications. During this period all aspects of the patients' health and wellbeing, including emotional/psychological and social circumstances, should be addressed. This phase may last several months and depending on the individual patient, their required level of support and the complexity of their case may require several visits. Once the foundations of long term care are in place the patient's condition should be stable and they should be happy with their care plan.

Level 5—Rolling Review

All known diabetic patients receiving ongoing input from their GP will be regularly monitored and reviewed. This will include regular HbA1c checks, frequency to be determined by level of control, regular retinal, foot and renal screening, monitoring of co-morbidities, specifically blood pressure and cholesterol levels, and a repeat of the cardiovascular risk factor score. It is anticipated that patients will fall into one of two review categories depending on their disease complexity and level of engagement with services.

5a. Optimised — Patients with a well-established care plans who are achieving good glycaemic control, are quick to engage with services if they have concerns and have no or well managed co-morbidities. These patients should only require annual opthalmological screening and 2-3 GP led reviews per year incorporating monitoring of HbA1c, blood pressure, cholesterol and renal function as well as foot checks.

5b. Closer Care — Patients with multiple co-morbidities who require closer monitoring to maintain good glycaemic control. Patients with poor motivation, difficult social/psychological circumstances who require a higher level of input and support. Patients who frequently do not attend, young people moving from paediatric to adult services etc. These individuals will require a more pro-active approach to ensure their continued engagement with services and should ideally be seen every 6-8 weeks to closely monitor progress and encourage establishment of self–caring behavior.

Level 6 — Early Escalation

Where a number of risk factors remain, care should be escalated to address these by -

- Aggressively treating hypertension and hypercholesterolaemia and strongly advocating smoking cessation.
- Addressing high risk behavours, eg. not wearing shoes, not checking feet, not taking medication, not attending screening/reviews.

- Where weight loss is desirable but remains problematic further support, encouragement, dietetic advice and medication should be considered.
- Where co-morbidies remain uncontrolled in the primary care setting, despite utilisation of best practice guidelines, referral for specialist input and shared care should be considered.
- Where glycaemic control remains problematic despite adherance to best practice guidelines, referral for specialist diabetic/endocrinology review and shared care should be considered.

Level 7—Curbing Compliations

Even with the best care achievable certain complications can and will occur. These will generally fall into one of two categories. Those which are short term and usually easily predictable in advance and can therefore be planned for, and those which cannot.

7a—Predictable complications—eg. Pregnancy, elective surgery, concurrent acute illness or flare of longstanding condition. These situtations will usually require a shared care approach whereby the relevent specialist will provide the necessary information and support to navigate the patient and their primary care team through the event. Provision can be made in advance for dealing with these situations. Eg. Advice on taking insulin/antihyperglycaemics when acutely unwell, taking steroids, planning for and treatment during pregnancy, fasting for surgery etc.

7b—Unpredictable Complications— eg. Nephropathy, neuropathy, retinopathy, cardiovascular disease (ACS/TIA/PVD). Unpredicatable in this case does not imply unanticipated. These are recognised complications of long term diabetes and at every preceeding level every effort should have been made to prevent these events. However, who will develop these problems and when remains somewhat a matter of chance. In the event of these complications occuring the appropriate specialist needs to be invloved at the earliest opportunity to review current management and make recommendations on how to proceed with ongoing care and secondary prevention in that individual.

Level 8— Avoidable admissions

Diabetic patients who are admitted to hospital for treatment for the following conditions; HSS/HONK, DKA, Hypoglycaemia and infected ulcers (possibly requiring amputation) can be considered avoidable admissions. Through a combination of patient education, regular review, specialist input and advanced planning the liklihood of these events occuring should be minimised. In particular this would involve ensuring that patients are well educated on and happy with the administration of their medications, especially insulin. That they know what to do if they are unwell or cannot take their mediation and have a designated point of contact for

advice. That they are re-educated in the event of a change in their medication regime. Patients at risk of self neglect should be identified and a good system for review of and dressing of ulcers in a community setting should be established to prevent infection related admissions. In the event that these events do occur the admission should be reviewed and changes made where appropriate to prevent their reccurance.

Level 9—Inevitable admissions

The aim of this care pathway is to reduce the rate of complications, slow the progression of disease and minimise hopital admission through the practice of evidence based medicine. However, it is inevitable that with time clinical complications will accumulate and that some of these will require hospital admission. These might include eye surgery for advanced retinopathy, renal replacement for advanced nephropathy and emergency admission for treatment of stroke and MI. Following a hospital admission regular review should be resumed with additional focus on the cause of admission and alteration of the care plan as appropriate. The emphasis should always be on best possible mangement in the community setting.

Level 10—Rationalised Care

Whilst the positive effect of good glycaemic control and management of co-morbidities is evident in the relative reduction in risk of complications the benefits must always be considered in the context of the individual patient. There will be individuals in whom the control of their diabetes is a secondary consideration in terms of their overall health. In patients with cancer or other terminal illness, the very (frail) elderly, those with severe physically or mentally disabling conditions it may be inappropriate to continue aggressively treating diabetes or its associated risk factors. A balance must be struck to ensure that the quality of life experienced by the patient is not sacrificed at the expense of its prolongation.

4 The Example Service Specification

The sample service specification has aligned all steps in the pathway to the NICE Quality Standard and other examples of good care. The specification is set out in the National Contract template. To allow for local flexibility the level of detail within the specification has been kept to a minimum. Example details about eligibility criteria, referral routes, and frequency, discharge and outcomes measures are included in Appendix B at the end of the document.

This specification details both the specialist and generalist elements of care. These have been formatted into an example service structure based on examples of best practice currently available. It is intended that these services are commissioned together to allow for the essential overlap of generalists and specialists that will allow for continuity of care.

NOTE: the terms "generalist" and "specialist" are not recognised contractual terms and so when using the specification to commission services the term "Provider" should be used.

Where the specification is referring specifically to generalist care the font colour is blue, when specialist the font colour is green. Where a community based MDT is commissioned, suggested services delivered in this setting will be described in purple font. However, where a community based MDT is not commissioned, then the services described in purple font would usually be included in those delivered in the specialist setting – green font. Where the elements of care can equally be provided in generalist or specialist services, or where statements cover the whole pathway the font colour is black.

These differences are also made obvious in the text.

Type of care	Font colour
Generalist	Blue
Community based MDT	**Purple**
Specialist	Green
Both specialist and generalist/unspecified	Black