Foot care service for people with diabetes

Commissioning guide
Implementing NICE guidance

October 2006

NICE clinical guideline CG10
Foot care service for people with diabetes

This commissioning guide provides support for the local implementation of NICE clinical guidelines through commissioning, and is a resource to help health professionals in England to commission an effective foot care service for adults and children with diabetes mellitus.

This commissioning guide should be read in conjunction with the following NICE guidance:

- NICE quality standard for diabetes in adults
  http://www.nice.org.uk/guidance/qualitystandards/diabetesinadults/diabetesinadultsqualitystandard.jsp
- NICE clinical guideline CG119 ‘Diabetic foot problems – Inpatient management of diabetic foot problems’
- NICE clinical guideline CG10 ‘Type 2 diabetes: prevention and management of foot problems’
- NICE clinical guideline CG15 ‘Type 1 diabetes: diagnosis and management of type 1 diabetes in children, young people and adults’.

The clinical guidelines cover clinical and cost effectiveness in detail and underpin the content of this guide.

The guide:

- uses the NICE clinical guideline CG10 on type 2 diabetes-foot care to inform the care of people with both type 1 and type 2 diabetes, as the national full clinical guideline, on the diagnosis and management of type 1 diabetes in adults recommends ‘following the type 2 diabetes guideline for foot care’ in the management of foot ulceration and associated risk factors
- makes the case for commissioning a foot care service for people with diabetes (adults and children)
- specifies service requirements
- helps you determine local service levels helps you ensure corporate and quality assurance.

The full text of this commissioning guide can be downloaded or accessed from the navigation menu on the right hand side of the screen. Download the openly available commissioning and benchmarking tool, there is no need to register.

We are keen to improve the commissioning guides in order to better meet the needs of commissioners. Please send us your ideas for future topic-specific guides or other comments.

Read the NICE disclaimer for information on the use and accuracy of content on the NICE website.

- Topic-specific Advisory Group: foot care service
Commissioning a foot care service for people with diabetes

Diabetes can have a profound impact on lifestyle, health and life expectancy, and has a significant impact on health and social services. The Diabetes national service framework (2001) reported that around 5% of total NHS resources and up to 10% of hospital in-patient resources are used for the care of people with diabetes.

Foot complications are common in diabetes, and are associated with peripheral vascular disease (the damage caused to large blood vessels supplying lower limbs) and neuropathy (damage/degeneration of the nerves).

The provision of appropriate foot care is an important component of the care of people with diabetes. It helps to avoid morbidity due to foot ulceration and amputation, thus helping those with diabetes to maintain their quality of life.

All people with diabetes require foot care examination and review, at least annually, to detect risk factors for ulceration. Examination involves a visual inspection of the feet and footwear, testing of foot sensation and palpation of foot pulses.

**Benefits**

The potential benefits of robustly commissioning an effective foot care service for people with diabetes include:

- **ensuring that all people with diabetes receive appropriate foot care** in line with the [NICE clinical guideline CG10 on type 2 diabetes-foot care](https://www.nice.org.uk/guidance/cg10) and [NICE clinical guideline CG119 ‘Diabetic foot problems – Inpatient management of diabetic foot problems’ reducing the risk of foot ulcers, infections and amputations, which](https://www.nice.org.uk/guidance/cg119) can release capacity in secondary care, and improve quality of care
- **reducing inequalities** in access to foot care
- **better value for money**, through helping commissioners to manage their commissioning budgets more effectively – this may include opportunities for clinicians to undertake local service redesign to meet local requirements in novel ways.

**Key clinical issues**

Key clinical issues in providing an effective foot care service are:

- **accurately diagnosing all people with diabetes within primary care**, maintain a register, and ensuring they receive foot care according to the [NICE foot care guideline algorithm](https://www.nice.org.uk/guidance/cg119)
- **providing effective foot care** for people with diabetes as appropriate
developing and implementing a system for timely call and recall of patients based on their risk of foot ulcers
providing a quality assured service.

National priorities

National priorities and initiatives relevant to commissioning a foot care service for people with diabetes include:

- **NHS Outcomes Framework**
- **Public Health Outcomes Framework**
- **The Operating Framework for the NHS in England 2012-13.**
- **Liberating the NHS: legislative framework and next steps**
- **Commissioning Diabetes Footcare Services**
- ‘**National service framework for diabetes**’ and associated delivery strategy
- **Six years on: Delivering the diabetes National Service Framework**
- **Quality Innovation Productivity and Prevention (QIPP) long term conditions work stream**
- **Using the Commissioning for Quality and Innovation (CQUIN) payment framework – a summary guide**
- **Developing a Year of Care for diabetes**
- ‘**Improving chronic disease management**’.
- Considering the impact of **patient choice**.
- Implementation of NICE clinical and public health guidelines. These are core standards, and performance against these standards will be assessed by the **Care Quality Commission** in line with ‘**Standards for better health**’.

Although many or all of these priorities may be relevant to the services nationally, your local service redesign may address only one or two of them.
Specifying a foot care service for people with diabetes

Service components

The key components of an effective foot care service for people with diabetes are:

- appropriate foot care management and referral
- developing a high-quality foot care service.

Appropriate foot care management and referral

All people with diagnosed diabetes should have an annual review, which should include an examination of their feet to detect risk factors for ulceration.

While this guide does not describe the diagnosis and general management of people with diabetes, as this is covered in a range of NICE clinical guidelines and technology appraisals, it is clearly important to identify people with diabetes to ensure they all receive foot care and education according to need. See the NICE foot care guideline algorithm.

The NICE quality standard for diabetes in adults includes the following statements which relate directly to diabetes foot care:

‘People with diabetes receive an annual assessment for the risk and presence of the complications of diabetes, and these are managed appropriately’ (statement 8).

‘People with diabetes with or at risk of foot ulceration receive regular review by a foot protection team in accordance with NICE guidance, and those with a foot problem requiring urgent medical attention are referred to and treated by a multidisciplinary foot care team within 24 hours’ (statement 10).

The key priorities for implementation, outlined in the NICE clinical guideline CG10 on type 2 diabetes-foot care, are:

Care of people at low current risk (normal sensation palpable pulses)

- Agree a foot care management plan including education.

Care of people at increased risk of foot ulcers (neuropathy or absent pulses or other risk factor)

- Arrange regular review, 3–6 monthly, by foot protection team.
- At each review:
  - inspect patient’s feet
  - consider need for vascular assessment
- evaluate footwear
- enhance foot care education.

If a patient has had previous foot ulcer or deformity or skin changes manage as high risk.

**Care of people at high risk of foot ulcers** (neuropathy or absent pulses plus deformity or skin changes or previous ulcer)

- Arrange frequent review (1–3 monthly) by foot protection team.
- At each review:
  - inspect patient’s feet
  - consider need for vascular assessment
  - evaluate and ensure the appropriate provision of
    ◊ intensified foot care education
    ◊ specialist footwear and insoles
    ◊ skin and nail care
- Ensure special arrangements for those people with disabilities or immobility.

**Care of people with foot care emergencies and foot ulcers**

- Foot care emergency (new ulceration, swelling, discolouration)
  - Refer to multidisciplinary foot care team within 24 hours.
- Expect that team, as a minimum, to:
  - investigate and treat vascular insufficiency
  - initiate and supervise wound management
    ◊ use dressings and debridement as indicated
    ◊ use systemic antibiotic therapy for cellulitis or bone infection as indicated
  - ensure an effective means of distributing foot pressures, including specialist footwear, orthotics and casts
  - try to achieve optimal glucose levels and control of risk factors for cardiovascular disease.

Ensuring that people with diabetes at risk of foot ulcers are referred for appropriate foot care is important both in terms of reducing the risk of foot complications, but also in managing service demand.

**Care of people with a diabetic foot problem whilst in hospital** (refer to CG119 for full details of the key priorities for implementation)

- Each hospital should have a care pathway for patients with diabetic foot problems who require inpatient care.
- The multidisciplinary foot care team should consist of healthcare professionals with the specialist skills and competencies necessary to deliver inpatient care for patients with diabetic foot problems. This should normally include a diabetologist, a surgeon with the relevant expertise in managing diabetic foot problems, a diabetes nurse specialist, a podiatrist and a tissue viability nurse.
• Refer the patient to the multidisciplinary foot care team within 24 hours of the initial examination of the patient's feet. Transfer the responsibility of care to a consultant member of the multidisciplinary foot care team if a diabetic foot problem is the dominant clinical factor for inpatient care.

• Each hospital should have antibiotic guidelines for the management of diabetic foot infections.

**Developing a high-quality foot care service**

The [NICE clinical guideline CG10 on type 2 diabetes-foot care](https://www.nice.org.uk/guidance/cg10) recommends the following general management approach as a key priority for implementation.

- Effective care involves a partnership between patients and professionals, and all decision making should be shared.
- Arrange recall and annual review as part of on-going care.
- As part of annual review, trained personnel should examine patients' feet to detect risk factors for ulceration, which should include:
  - testing of foot sensation using a 10 g monofilament or vibration
  - palpation of foot pulses
  - inspection of any foot deformity and footwear.
- Classify foot risk as: low current risk; at increased risk; at high risk; ulcerated foot.

The contributions of the various professional groups, competences required by team members, and skill mix of the overall team should be considered when setting up a foot care team. The [NICE clinical guideline CG10 on type 2 diabetes-foot care](https://www.nice.org.uk/guidance/cg10) on the prevention and management of foot problems recommends that ‘healthcare professionals and other personnel involved in the assessment of diabetic feet should receive adequate training’.

It also states that the on-going care of people with foot ulcers ‘should be undertaken by a multidisciplinary foot care team’ which ‘should comprise highly trained specialist podiatrists and orthoptists, nurses with training in dressing of diabetic foot wounds and diabetologists with expertise in lower limb complications. They should have unhindered access to suites for managing major wounds, urgent inpatient facilities, antibiotic administration, community nursing, microbiology diagnostic and advisory services, orthopaedic/podiatric surgery, vascular surgery, radiology and orthotics.’ Likewise the [NICE clinical guideline CG15 on type 1 diabetes](https://www.nice.org.uk/guidance/cg15) also recommends ‘referral to a specialist diabetes foot care team incorporating specifically trained foot care specialists.’

A locally placed, responsive, safe and effective foot care service for people with diabetes could be delivered in partnership between primary care, podiatry services and secondary care, with the different teams being responsible for specific steps in the diagnostic, treatment and monitoring process, according to risk categories.

**Education** is considered a fundamental part of diabetes care, the ultimate aim of which is to improve:
● control of vascular risk factors, including blood glucose, blood lipids and blood pressure
● management of complications, if and when they develop
● quality of life.

Structured patient education should be made available to all people with diabetes at the time of initial diagnosis, and then as required on an on-going basis, based on a formal, regular assessment of need. See the NICE Technology appraisal TA60: guidance on the use of patient-education models for diabetes.

Local stakeholders including service users should be involved in determining what is needed from a foot care service in order to meet local needs. The service should be patient-centred and integrated with other elements of care for people with diabetes.

The service specification needs to consider:
● Review and assessment service
● service at each risk level
● required competences of, and training for, staff responsible for providing foot care at each risk level
● the expected number of patients (this should take into account how quickly any changes in service provision are likely to take place)
● ease of access
● location of the service
● information and audit requirements, including IT support and infrastructure
● service monitoring criteria

Useful sources of information may include:
● The NICE Pathway for diabetes care provides an information resource which visually organises NICE recommendations about diabetes management.
● The NICE Quality Standard for Diabetes in adults is a set of specific, concise statements which sets out high quality, cost-effective diabetes care.

● The ’Diabetes commissioning toolkit’ provides useful advice for all commissioners of diabetes services. It describes how to carry out a health needs assessment for a local diabetes population and provides a generic specification for diabetes care, signposting recognised quality markers and suggesting key outcomes for the service.
● Clinical Knowledge Summaries provide clinical knowledge about the common conditions managed in primary and first contact care. Seemanagement of foot problems in people with type 2 diabetes
Determining local service levels for a foot care service for people with diabetes

Benchmarks for a standard population

Available data suggest that the number of people with diagnosed diabetes is 5.5% or 5,500 per 100,000 population aged 17 or over. Of whom, 100% will require foot care management including education.

Of these, approximately 193 per 100,000 may be expected to require emergency foot care treatment, and 2008 per 100,000 may require foot care and reviews at frequencies based on their elevated (increased or high) risk level.

Table 1 provides estimates of the numbers of people with diagnosed diabetes who are at elevated risk (that is, ‘increased’ and ‘high’ risk), and the likely number of appointments that may be required according to the recommended frequencies of review in the NICE clinical guideline CG10 on type 2 diabetes - foot care. The full guideline on Type 1 diabetes in adults recommends ‘following the type 2 diabetes guideline for foot care’ in the management of foot ulceration and associated risk factors.

Table 1: The number of people with diagnosed diabetes and frequency of reviews

<table>
<thead>
<tr>
<th>Risk level</th>
<th>Proportion of diabetes patients</th>
<th>Frequency of review (annually)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Risk</td>
<td>60%</td>
<td>1</td>
</tr>
<tr>
<td>Increased risk</td>
<td>26.50%</td>
<td>2-4</td>
</tr>
<tr>
<td>High risk</td>
<td>10%</td>
<td>4-12</td>
</tr>
<tr>
<td>Likely to Require Emergency foot care</td>
<td>3.50%</td>
<td>n/a</td>
</tr>
</tbody>
</table>

This service is likely to fall under the programme budgeting category 4A (endocrine, nutritional and metabolic problems - diabetes).

Examine the assumptions used in estimating these figures.

Use the foot care service commissioning and benchmarking tool to determine the level of service that might be needed locally and to calculate the cost of commissioning the service using the indicative benchmark and/or your own local data.

Assumptions used in estimating a population benchmark

The assumptions used in estimating a population benchmark of the number of people with diagnosed diabetes requiring foot care are based on the following sources of information:
• epidemiological data on the prevalence of diagnosed diabetes within the population, and the prevalence of risk factors for foot ulceration among people with diabetes
• expert clinical opinion of the topic-specific advisory group, based on experience in clinical practice and literature review.

Epidemiological data
The 2010/2011 Quality and Outcomes Framework (QOF) results indicate that 5.5% of the population has diagnosed diabetes. This is likely to be an underestimate of the actual prevalence of diabetes within the population, due to QOF exception reporting, and under-diagnosis.

The APHO diabetes model provides estimates of total (diagnosed and undiagnosed) diabetes prevalence for people aged 16 years and older for 2009, 2010, 2015, 2020, 2025 and 2030 and thus allows for planning of future service provision.

The proportion of people with diabetes who are at an elevated (increased or higher) risk of developing foot ulcers may be estimated from the prevalence of diabetic neuropathy and peripheral vascular disease (PVD), both of which are complications of longstanding diabetes.

Published research indicates that 20-40% of people with diabetes are estimated to have neuropathy and around 2-5% are likely to have foot ulcers. Published research also indicates that around 19-29% have PVD. These values depend on how PVD and neuropathy are defined and measured. Research also indicates that there is a considerable overlap in the proportion of people with diabetes who have PVD and those with neuropathy, and has been estimated to be around 13%.

Based on the midpoints of the estimates on the prevalence of PVD (24%) and neuropathy (30%), and taking into account a 13% overlap, an estimated 41% of people with diabetes are at an elevated risk of foot ulceration. The remaining 59% of people with diabetes will be at low current risk.

Using published research it has not been possible to determine the proportion of people with diabetes at elevated risk who fall into the different risk categories for foot ulceration. See the NICE clinical guideline CG10 on type 2 diabetes: prevention and management of foot problems and the NICE clinical guideline CG15 on type 1 diabetes: diagnosis and management of type 1 diabetes in children, young people and adults.

Expert clinical opinion
The consensus opinion of the topic-specific advisory group was:

• approximately 60% of people with diabetes are likely to be at low risk of foot ulceration, but will require a management plan including foot care education as indicated in the NICE clinical guidelines CG10 on type 2 diabetes - foot care and CG15 on type 1 diabetes
• approximately 40% are likely to be at some degree of elevated risk of foot ulceration of which:
• 25-28% are likely to be at increased risk
• 10% are likely to be at high risk
• 2-5% are likely to require emergency foot care.

Conclusions
Based on the epidemiological data and the estimates from the consensus opinion of the topic-specific advisory group above, the population benchmark for a diabetic foot care service is 2.2%.
This is based on the population prevalence of diagnosed diabetes of 5.5%, of which:

- **26.5%** of people with diabetes - or 1.46% of the population age 17yrs and older - are likely to be at **increased risk** of foot ulceration. This is based on the midpoint of the estimate provided by the topic-specific advisory group (25-28%).

- **10%** of people with diabetes - or 0.55% of the population age 17yrs and older - are likely to be at **high risk** of foot ulceration. This is based on the estimate provided by the topic-specific advisory group.

- **3.5%** of people with diabetes - or 0.19% of the population age 17yrs and older - are likely to require **emergency foot care**. This is based on the midpoint of the estimates provided by the topic-specific advisory group (2-5%).

This means that 40% of people with diagnosed diabetes aged 17 or over (5.5% of the population) will require review and treatment at a level and frequency above the standard which is recommended for all people with diagnosed diabetes. This translates into a population benchmark of 2.2%.

However, 60% of people with diabetes aged 17 or over - or 3.3% of the population as a whole - are likely to be at low current risk. Commissioners should consider that these people require an annual review, which should include an examination of their feet to detect risk factors for ulceration.

Use the foot care service commissioning and benchmarking tool to determine the level of service that might be needed locally and to calculate the cost of commissioning the service using the indicative benchmark and/or your own local data.

Commissioners should use their local needs assessment to determine optimum levels for local service provision. Commissioners should note that the benchmark rates do not represent NICE’s view of desirable, or maximum or minimum, service levels.

Commissioners should use this benchmark and local data to facilitate local discussion on optimum service levels. There is considerable variation in the number of people with diabetes. This is influenced by the social, economic and demographic profile of the local population, therefore commissioners are encouraged to consider local assumptions.
The commissioning and benchmarking tool

Download the foot care service commissioning and benchmarking tool

Use the foot care service commissioning and benchmarking tool to determine the level of service that might be needed locally and to calculate the cost of commissioning the service as described below.

Identify indicative local service requirements

The indicative benchmark based on the prevalence of diagnosed diabetes within the population and the prevalence of risk factors for foot ulceration among people with diabetes, is **2.2%**.

The commissioning and benchmarking tool helps you to assess local service requirements using the indicative benchmark as a starting point. With knowledge of your local population and its demographic, you can amend the benchmark to better reflect your local circumstances. For example, if your population is significantly younger or older than the average population, or has an ethnic composition different from the national average, or has a significantly lower or higher rate of obesity, you may need to provide services for relatively fewer or more people.

Review current commissioned activity

You may already commission a foot care service for your population. You can download your own up-to-date secondary care activity data into the tool and data specifications and user notes are provided to help. You can review and amend the downloaded data for your population to calculate the service levels and cost of the service you currently commission. When commissioning outpatient appointments or activity outside of secondary care the tool provides you with tables that you can populate to help you calculate your total current commissioned activity and costs.

Identify future change in capacity required

Using the indicative benchmark provided, or your own local benchmark, you can use the commissioning and benchmarking tool to compare the activity that you might need to commission against your current commissioned activity. This will help you to identify the future change in capacity required. Depending on your assessment, your future provision may need to be increased or decreased.

Model future commissioning intentions and associated costs

You can use the commissioning and benchmarking tool to calculate the capacity and resources needed to move towards the benchmark level, and to model the required changes over a period of 4 years. Use the tool to calculate the level and cost of activity you intend to commission and to consider the settings in which the foot care service for people with
diabetes may be provided, comparing the costs of commissioning the service across the various settings. The tool is pre-populated with data on the potential recurrent and non-recurrent cost elements that may need to be considered in future service planning, which can be reviewed and amended to better reflect your local circumstances.

Commissioning decisions should consider both the clinical and economic viability of the service, and take into account the views of local people. Commissioning plans should also take into account the costs of monitoring the quality of the services commissioned.

Ensuring corporate and quality assurance

Commissioners should ensure that the services they commission represent value for money and offer the best possible outcomes for patients. Commissioners need to set clear specifications for monitoring and assuring quality in the service contract.

Commissioners should ensure that they consider both the clinical and economic viability of the service, and any related services, and take into account patients’ views and those of other stakeholders when making commissioning decisions.

A foot care service for people with diabetes needs to:

- be integrated with other elements of care for people with diabetes
- define the agreed criteria for referral, local protocols and the foot care pathway for people with diabetes
- be patient-centred and provide equitable access
- audit the number of foot ulcers and amputations – see Appendix D of the NICE clinical guideline CG10 on type 2 diabetes-foot care
- be involved in the planning of changes to service provision and capacity in line with expected changes in the need for clinical services
- demonstrate how it meets requirements under equalities legislation
- demonstrate value for money.

Local quality assurance

Any mechanisms for quality assurance at a local level are likely to refer to the following.

- service targets: estimated caseloads, complaints procedures
- audit arrangements: frequency of reporting, reporting route and format, and dissemination mechanisms; this should include auditing the proportion of eligible people with diabetes who are provided with foot care and monitoring
• **clinical quality criteria**: appropriateness of referral, waiting times, consenting procedures

• **patient satisfaction**: patient perspective and perceptions

• **patient outcomes**: reduced incidence of foot ulcers, complications and amputations and associated hospital admissions. See also the outcomes identified in *putting feet first: commissioning specialist services for the management and prevention of diabetic foot disease in hospitals*

• **staff competence**: individual and team baseline requirements, monitoring and performance

• **information requirements**, including both patient-specific information (NHS number, referring GP) and service-specific information (workload trends, number of complaints)

• **the process for reviewing the service with stakeholders**, including decisions on necessary changes to improve or to decommission the service.

• **achieving targets associated with equalities legislation**.

**Further information**

**General information** on quality and corporate assurance can be obtained from the following sources:

- The [National Patient Safety Agency](#) (NPSA) oversees the implementation of a system to report and learn from adverse events and near misses occurring in the NHS. The publication ‘Seven steps to patient safety’ provides an overview of patient safety and gives updates on the tools the NPSA is developing to support patient safety across the health service.

- [NHS Alliance online resource](#) is the representational organisation of primary care and primary care trusts, and provides them with an opportunity to network and exchange best practice. The alliance supports its members with an open access helpline, in-house and joint publications and briefings, internal newsletters and a website.

- The [DH commissioning framework](#) provides guidance on the commissioning process, in the context of the NHS reform agenda.

- NHS Institute for Innovation and Improvement support for commissioners, includes [Commissioning for Health Improvement](#) products to accelerate the achievement of world class commissioning; [The Productive Leader](#) programme to enable leadership teams to reduce waste and variation in personal work processes, and [Better care, better value indicators](#) to help
inform planning, to inform views on the scale of potential efficiency savings in different aspects of care, and to generate ideas on how to achieve these savings.

- **10 Steps to your SES: a guide to developing a single equality scheme**. This guidance has been developed to assist NHS organisations that have a duty, as public authorities, to comply with the race, disability and gender public sector duties, and in anticipation of new duties in relation to age, religion and belief, and sexual orientation.

**Specific information** on quality and corporate assurance for a foot care service for people with diabetes can be obtained from the following sources:

- **NHS Diabetes** supports healthcare professionals to implement the Diabetes National service framework standards. The website contains a range of service examples and other resources.
- **National diabetes audit (NDA)**
- The National Diabetes Audit is developed and delivered by NCASP, which is part of The Information Centre.
- **‘Better metrics’** is a pragmatic project that provides clinically relevant measures of performance to support the development of measurable local targets and indicators for local quality improvement projects. To indicate the effectiveness of long-term clinical management of diabetes and of long-term complications, see metric 4 for indicators on diabetes, and specifically 4.07 in relation to foot ulceration.
- The **‘Quality and outcomes framework (QOF)’** was designed to deliver substantial financial rewards for high-quality care. The framework sets out a range of national standards based on the best available research evidence.
- **‘Skills for Health’** works with employers and other stakeholders to ensure that those working in the sector are equipped with the right skills to support the development and delivery of healthcare services. See details of the diabetes competency framework. Specifically the competencies Diab DF 01 - 03 relating to a diabetes foot care service.
- The **‘National minimum skills framework for commissioning foot care services for people with diabetes’** has been developed by Foot in Diabetes UK, in collaboration with Diabetes UK, the Association of British Clinical Diabetologists, the Primary Care Diabetes Society and the Society of Chiropodists and Podiatrists. It aims to support local service providers to deliver high quality foot care services for people with diabetes by ensuring health care professionals have the appropriate skills.
Sources of further information to help you in assessing local health needs and reducing health inequalities include:

- **National Diabetes Information Service (NDIS)**, where you can find a comprehensive range of diabetes data, tools and information via one web portal

- **NHS Evidence** is a service that enables access to authoritative clinical and non-clinical evidence and best practice through a web-based portal.

- **NHS IC Indicator Portal** website gathers together a number of health and social care indicators.

- **NHS Atlas of Variation** 2011 covers 71 indicators and 15 Programme Budget categories

- **NHS Comparators** provides comparator data for NHS commissioning and provider organisations to enable users to investigate aspects of local activity, costs and outcomes

- The Disease management information toolkit (DMIT) is a good-practice tool for decision-makers, commissioners and deliverers of care for people with long-term conditions

- **Disease prevalence models** produced by the Association of Public Health Observatories provides primary care trust-level prevalence estimates by topic. (including diabetes)

- **The Diabetes Community Health Profiles** bring together a wide range of data on diabetes in adults into a single source for the purposes of benchmarking. The tool allows you to download a diabetes profile for each PCT in England


