Ministerial Foreword

Diabetes care in Scotland has come a long way in the five years since we published the *Scottish Diabetes Framework*. The Framework has raised the profile of diabetes and ensured that local and national action is now delivering real improvements for people with diabetes. Some of the good work is described at the end of the report, and I am especially encouraged that it is happening across Scotland. I should like to thank the Scottish Diabetes Group for its role in overseeing implementation of the Framework. I also welcome the opportunities I have had for regular personal engagement and dialogue with people with diabetes and their carers, as well as with the organisations that speak on their behalf.

We have to manage the consequences of ever-increasing numbers of people with long-term conditions. We have to move to an approach that prevents people becoming unwell, treat them better and faster if they do, and wherever possible, treat them closer to their home. That was a key commitment I gave in *Delivering for Health*. Diabetes rates have continued to rise at frightening rates. That’s why I am totally committed to health improvement. The Executive has made this a key part of its health policy, most recently with the Prevention 2010 initiative which aims to reduce the risk of long-term conditions in our most deprived communities. But as more people develop diabetes, we have to make sure that services not only keep pace with the increase, but also develop to offer the best outcomes.

Our work in diabetes has been an exemplar of these priorities. Much of what has been achieved provides a model for other services to follow. It is right, though, that a fresh diabetes Action Plan should be launched now to take that work forward in line with the principles of *Delivering for Health*. I welcome the fact that the Action Plan also builds on the work NHS Quality Improvement Scotland has done in reviewing its standards for diabetes care, and complements the diabetes criteria in the GMS contract.

The Action Plan points to issues where significant developments can be made. It supports opportunities to explore new ways of working and highlights a number of national initiatives to develop and implement new ideas. The action points vary in scale and scope, but all are intended to move the diabetes agenda forward in ways which will lead directly or indirectly to improved care for people with diabetes and their carers.

This Action Plan sets out a challenging agenda for the next three years. We will work with people with diabetes, the voluntary sector, healthcare professionals, NHS Boards and their planning partners as well as other stakeholders to ensure that the plan is implemented and that people’s experience of diabetes care is improved.

ANDY KERR MSP
Minister for Health and Community Care
Background

Diabetes is a long-term and progressive condition with potentially devastating consequences for health. Over 170,000 people in Scotland have been diagnosed with diabetes and it is believed that many thousands more have the condition but have not yet been diagnosed. The prevalence of diabetes continues to rise, particularly for Type 2 diabetes which is often associated with unhealthy bodyweight. It is possible that within 25 years, one in 10 people in Scotland will have diabetes.
The Scottish Diabetes Framework

In 2002, the Scottish Executive published the Diabetes Framework – a strategy to contain the growth of diabetes and to ensure that people with diabetes in Scotland would have access to the best quality care and treatment. The 2002 Framework identified the various “building blocks” of diabetes, and set the focus on seven areas of key priority. Published alongside national clinical standards for diabetes, the Framework set out a clear way forward for diabetes in Scotland. It also supported a number of practical measures to stimulate progress whilst allowing local diabetes services to retain the freedom to plan and manage their own services, and to implement creative solutions to meet the needs of patients in their area.

Making a Difference

The Diabetes Framework is already making a real difference to people’s lives throughout Scotland.

- A national programme to reduce visual loss in people with diabetes using state of the art digital photography is being delivered.

- The creation of managed clinical networks for diabetes care in every NHS Board area has provided leadership and a focus for diabetes services locally.

- Every person with diabetes has their care supported through the roll-out of a national computer system.

- In collaboration with NHS Quality Improvement Scotland the quality of care of people with diabetes in every NHS Board area has been reviewed and published.
There has been an overall improvement in the proportion of people with diabetes receiving regular checks and achieving treatment goals. In spite of the increasing numbers, more people with diabetes are now receiving the regular health checks they need and more patients are receiving the support and treatment they need to achieve better control of their blood sugar (HbA1c), blood pressure, cholesterol and kidney function (microalbumin).

The Diabetes Framework sits well alongside other parts of the Executive’s health strategy. So, while some initiatives on issues such as professional development, waiting times or changes to community pharmacy are not specifically about diabetes, they provide major benefits for people with diabetes.

The Scottish Primary Care Collaborative is a quality improvement programme run by the Centre for Change and Innovation at the Scottish Executive. The Collaborative improves access to primary care professionals, hence improving the management of care for people with chronic diseases. In its first phase, the Collaborative supported 177 GP practices to take a more proactive approach to the care and management of people with diabetes. This resulted in significant improvements in the numbers of people with diabetes meeting treatment targets, e.g. a 49% improvement for cholesterol control, 31% for blood sugar control and 34% for blood pressure control.
“In spite of the increasing numbers, more people with diabetes are now receiving the regular health checks they need.”
The Quality and Outcomes Framework – part of the new General Medical Services contract – provides rewards to general practices for improving the services they provide. This supports more local primary care teams in providing systematic management of diabetes.

Recording of Key Biomedical Markers: Scotland 2003–2005

Data recorded within the previous 15 months

Source: Scottish Diabetes Survey

Patients reaching targets for HbA1c, Blood Pressure and Cholesterol in 2004 and 2005

Source: Scottish Diabetes Survey 2004 and 2005
“The Health Service is changing. *Delivering for Health* sets out a vision for a health service that delivers responsive, personalised care, striking the right balance between bringing services closer to home and offering specialist care in centres of excellence.”
Delivering for Health

The Health Service is changing. Delivering for Health sets out a vision for a health service that delivers responsive, personalised care, striking the right balance between bringing services closer to home and offering specialist care in centres of excellence. The model centres on the need to evolve from a health service geared to providing episodic care in hospital for acute conditions into a service designed to manage long-term conditions in a continuous and integrated manner in the community, and indeed to become a service that promotes good health rather than simply treating illnesses. Self-management, a concept familiar to everyone with diabetes, is also a central feature of the model.

Delivering for Health held up the Diabetes Framework and recent initiatives in diabetes management as examples of positive practice and emphasises the need for a decisive shift in the balance of care within the NHS in order to meet the challenges of an aging population which will result in a growing number of people living with long-term conditions. It also highlights the importance of applying a more systematic approach to the care of people with long-term conditions. This requires identifying the local population with long-term conditions and understanding their needs in order to tailor health and social care services to meet individual requirements. This is done through adopting more proactive, systematic approaches to patient management, underpinned by good prevention. Self-management is also an essential element of the model. Diabetes services are in the frontline in terms of facing these pressures and of finding ways to provide care which fits the model of care endorsed by Delivering for Health. In this context, it is an opportune time to refresh the Framework and develop an action plan for the next three years.
Review and Consultation

A review of the 2002 *Diabetes Framework* was undertaken in 2004 to find out what patient representatives and healthcare professionals thought about the Framework’s impact and what they considered to be the main challenges and priorities for the future. The review concluded that solid progress had been made in a number of key areas but also emphasised the importance of maintaining this momentum. The review also drew attention to several areas where further work was required. The 2002 *Framework* included a model of diabetes care to illustrate the breadth and complexity of diabetes care and to highlight those areas identified as requiring priority action. The figure below updates the model, incorporating the findings and recommendations of the review of the *Framework*.

Building Blocks of Diabetes Care (2006)
Introducing an Action Plan for 2009

This document sets out an ambitious action plan, the implementation of which will bring real benefits to patients. Some of the goals will produce rapid results, others will bear fruit over a longer timeframe. The report focuses on nine main aims which lay at the heart of our ambition to develop a world class diabetes service. Because these nine aims are to be addressed over the next three years – to the end of 2009 – we have called this strategy 9 by 9.

1. Improve the quality of care and outcomes for all people with diabetes and reduce inequalities.

Delivering better care and better outcomes for people with diabetes will require redesigning services around the needs of patients – facilitating self-management and delivering services closer to the patient. A crucial part of this is to ensure that the benefits are available to everyone. This means proactively addressing inequalities where they exist (for example in terms of race, age, sex, or deprivation).

Those responding to the Executive’s consultation agreed that a greater focus was required on the needs of people with Type 1 diabetes. The needs of children and young people, who need to receive the best possible care and support in their early life to reduce the risk of complications later on, was particularly highlighted for action. Also important issue is the transition of children with diabetes from services provided by paediatric teams into the adult service. It is crucial to ensure that young people experience a smooth transition of care between these services and we will support work to improve young peoples’ experience of this transfer.

The review found patients, carers and clinicians wanted enhanced psychological support for people with diabetes. There was a perception that diabetes services do not always provide adequate emotional support for patients, and also that specialist psychological services are difficult to access for those patients experiencing significant problems. However, psychological support is a scarce resource throughout the health service, so thought needs to be given to how
other members of the diabetes team can provide first-line support for those who do not need specialist psychological services.

People with diabetes can develop many different foot problems. Even ordinary problems can get worse and lead to serious complications. Foot problems most often happen when there is nerve damage (called neuropathy) which results in loss of feeling in the feet. Poor blood flow or changes in the shape of the feet or toes may also cause problems. Many people believe that foot amputation is inevitable with diabetes, but that is not the case today. With proper treatment and care, many foot problems can be prevented. We will support initiatives to ensure that all patients receive regular foot screening and that access to specialist foot care services is readily available to those patients which require such input.

People from black and minority ethnic groups are more likely to develop Type 2 diabetes, to develop it at an earlier age and with lower levels of body mass index (BMI) and more likely to develop the long-term complications of diabetes such as cardiovascular disease and renal disease. We need to make sure that healthcare professionals are appropriately equipped and trained to identify and manage these patients. An essential starting point is to improve recording of ethnicity data to enable health trends and disparities in minority ethnic communities to be monitored and to help target action where appropriate.

(2) Ensure that all people with diabetes have access to effective retinopathy screening.

Eye care was identified as a priority in the Scottish Diabetes Framework in 2002. Since then, we have developed a new diabetic retinopathy screening service. This service – the first such national screening service in the UK – has increased the capacity and quality of eye screening for people with diabetes and will ensure that all people with diabetes are offered regular appointments to check for changes in the back of their eyes. We need now to ensure that the programme operates consistently and effectively and that people with diabetes are made aware of the importance of regular eye checks.
“Delivering better care and better outcomes for people with diabetes will require redesigning services around the needs of patients – facilitating self management and delivering services closer to the patient.”
“Patient-centred care is the key for people with diabetes in Scotland. Self-care is a complex issue and it is vital that people with diabetes are supported to develop the skills they need to manage their condition effectively.”
(3) Enhance patient self-care and self-management by ensuring that all people with diabetes in Scotland have access to appropriate information and education.

Patient-centred care is the key for people with diabetes in Scotland. Self-care is a complex issue and it is vital that people with diabetes are supported to develop the skills they need to manage their condition effectively. Care needs to meet the needs of the individual with diabetes, wherever it is delivered.

Despite increased awareness of the long-term consequences of poor blood sugar control, most people with diabetes are unable to achieve the best possible control. Diabetes Managed Clinical Networks need to look critically at how they are providing education and support for patients who require insulin and find ways to redesign services to help more people to manage their care. The aim of structured patient education is to equip people with diabetes with the knowledge, skills and confidence to deal with their diabetes and effectively integrate self-management into their lives, and so improve their quality of life. The challenge for diabetes services is how to redesign work patterns and develop staff skills in order to deliver high quality education.

(4) Strengthen and develop diabetes ManagedClinical Networks in order to improve the effectiveness and efficiency of services for people with diabetes.

The 2002 Diabetes Framework established diabetes managed clinical networks to bring together clinicians, patients and carers to work across traditional boundaries in planning and delivering diabetes care. Now, diabetes networks need to consider whether services are being delivered at the right level in the hierarchy of care – whether through supported self-care, general practices or using hospital services, ensuring the right level of professional input and accessibility of services. Care pathways provide an effective mechanism to support the necessary changes. In part, this involves enabling other members of the healthcare team to provide routine care in order to allow specialists to devote more time to more complex cases and to training and supporting non-specialists. These changes will also require new ways of working, new ways of looking at professional roles and new ways of delivering services.

(5) Improve quality of patient data in order to improve clinical management and service planning.

Robust and reliable clinical data are vital for effective clinical management and for the efficient organisation of services. A clinical management system is also a critical part of the infrastructure supporting collaboration between different care settings, service redesign, clinical audit, call-recall and service planning. A national diabetes computer system (SCI-DC) has been implemented in Scotland to capture and manage these data. In order to ensure that the diabetes electronic record includes all people with diabetes and all aspects of care, there is a need to enhance links with community services such as podiatry and pharmacy and make sure that all general practice computer systems are fully able to contribute.

It is essential that the information which is captured by the computer system evolves to support new ways of working and ensure that patients receive the best possible care. For example, changing the way data about kidney function are recorded will improve the care for patients with kidney problems. Diabetes represents a significant risk factor for developing chronic kidney disease (CKD). Once identified, patients with progressive chronic kidney disease can then be treated actively to preserve remaining renal function and to manage appropriately the co-existing diabetes. The inclusion of a CKD domain in the Quality and Outcome Framework of the General Medical Services contract, using estimated Glomerular Filtration Rate (eGFR) encourages GPs to identify and monitor patients from the early stages of CKD, especially those at risk of developing cardiovascular and other complications.
(6) Develop and support staff to enhance their knowledge and skills in caring for people with diabetes.

It is crucial that healthcare professionals continue to develop their skills and knowledge to enable them to provide the best possible care to people with diabetes. The central importance of supporting and empowering patients to self-manage their diabetes means that all staff need to enhance their understanding of communication, behavioural change and the psychological aspects of diabetes care. It is also essential that healthcare professionals have access to decision support tools. We will therefore work with the Managed Knowledge Network of the NHS eLibrary and with SCI-DC to ensure that key evidence and recommendations (such as SIGN guidelines) are fully incorporated into decision support tools so that the information is readily available at the point of care.

(7) Increase diabetes research in Scotland.

The Scottish Diabetes Research Network has been appointed by the Chief Scientist Office to develop a disease-specific infrastructure in Scotland as part of the UK Clinical Research Collaboration. The Network aims to establish an integrated clinical trials infrastructure between the four major academic centres in Scotland (the universities of Dundee, Aberdeen, Glasgow and Edinburgh) and their associated managed clinical networks. Our ambition is to build upon the United Kingdom’s competitiveness in diabetes clinical trials research for the benefit of people with diabetes.

(8) Support initiatives to promote healthier lifestyles for people with diabetes and for the population as a whole.

Delivering for Health signalled an intention to shift the balance of care towards preventive medicine and by increasing anticipatory care, to reach out to those at greatest risk. The success of this health improvement agenda is crucial if we are to slow the increase in the numbers of people developing diabetes and reduce the rate of life-limiting complications in those people who do develop diabetes. The Executive has a long-standing health improvement agenda. The challenge now is to ensure that local diabetes Managed Clinical Networks implement the key messages from the
“It is crucial that healthcare professionals continue to develop their skills and knowledge to enable them to provide the best possible care to people with diabetes.”

various health improvement projects such as “Have a Heart Paisley” and “Prevention 2010”, making them relevant to their local populations.

Prevention 2010 will see up to £25 million over the next two years being used to strengthen primary care services in the most deprived areas of Scotland. Additional staff will identify those at particular risk of preventable, serious ill health and offer health checks, screening and advice. The focus will be on cardiovascular disease and its main risk factors, especially blood pressure, cholesterol, smoking and diabetes. This holistic approach will help to ensure that people developing diabetes are identified at an early stage.

(9) Improve the communication and dissemination of information about diabetes in Scotland.

More needs to be done to raise awareness of diabetes and the steps being taken to tackle it amongst the public, patients and healthcare professionals. Two key mechanisms to achieve this are clinical guidelines and clinical standards.

The development of clinical guidelines by SIGN (Scottish Intercollegiate Guidelines Network) played a significant role in raising the profile of diabetes in Scotland and in galvanising the diabetes community and the NHS to improve standards. The decision by SIGN to review the diabetes guideline represents an opportunity to ensure that the evidence base supporting diabetes care is easily accessible.

The consolidated diabetes guideline published in 2001 (SIGN 55) provided the main evidence base for the Clinical Standards published by NHS Quality Improvement Scotland. The baseline review of these standards undertaken in 2003 (and published in 2004) concluded that the care of people with diabetes in Scotland was generally of a very high quality, although it also highlighted issues where performance was less good or where there was insufficient information to draw clear conclusions. We welcome the decision by NHS Quality Improvement Scotland to revisit the standards to assess the progress made since the initial review.
The Action Plan

(1) Improve the quality of care and outcomes for all people with diabetes and reduce inequalities.

1.1 Ensure that services are available to meet the needs of people with Type 1 diabetes.

- The Scottish Executive will support a clinician to drive forward initiatives to raise standards of care for people with Type 1 diabetes. Working in close collaboration with the Scottish Study Group for the Care of the Young with Diabetes and other stakeholders, this initiative will focus on collating, developing and sharing best practice and promoting and co-ordinating work to improve and standardise education and care.

- Diabetes Managed Clinical Networks will work towards reducing the incidence of diabetes emergencies in type 1 diabetes. The Scottish Executive will commission during 2006/07 an audit of the incidence of diabetic ketoacidosis (DKA) in Scotland and support the implementation of the new national DKA management guidelines for adolescents and adults with Type 1 diabetes. DKA is a life-threatening metabolic emergency resulting from absolute insulin deficiency. Better patient education and more responsive support can reduce the incidence of these emergencies.

- The Scottish Diabetes Group, in collaboration with regional planning groups and NHS 24, will, by March 2007, host a meeting of Diabetes Managed Clinical Networks, professional groups and NHS agencies involved in out of hours care. The practicalities of rolling out the model of DiabNet to all parts of Scotland will be mapped out. By September 2007, Diabetes Managed Clinical Networks should put in place plans to improve access to out of hours diabetes advice for families with children with diabetes in order to reduce the number of unplanned admissions for metabolic emergencies.
Managed Clinical Networks should, by December 2007, put in place plans and protocols for the movement of care between children’s and adult services in order to improve patients’ experience of transitional care and to minimise the number of patients lost to follow up or with highly erratic clinic attendance during this period.

1.2 Improve access to psychological and emotional support for people with diabetes in all parts of Scotland.

- By December 2006, the Scottish Executive will invite bids for projects to develop and deliver training packages to enable staff caring for people with diabetes to improve their skills in behaviour change methods and psychological support, including the identification of depression and anxiety.

- Diabetes Managed Clinical Networks will ensure that existing staff training courses are informed by behaviour change models and the importance of patient empowerment.

1.3 Improve access to specialist foot care services for those with foot problems.

- The Scottish Executive will support a healthcare professional to drive forward initiatives to increase the capacity and improve the quality of diabetic foot care services. These initiatives will include:
  - Encouraging and supporting networking opportunities to develop and share models of good practice.
  - Undertaking a survey of the availability of specialist diabetic foot services in Scotland.
  - Developing a nationally accredited training programme to increase the number of staff able to provide routine foot screening.

- The Scottish Diabetes Group will work with SCI-DC to provide an on-line assessment tool for stratification of foot risk in all people with diabetes. The risk score will be known and recorded for at least 75% of all people with diabetes by April 2008.

“The Scottish Executive will support a clinician to drive forward initiatives to raise standards of care for people with Type 1 diabetes.”
“The Scottish Executive will publish, by June 2007, diabetes education packages tailored for six minority ethnic communities including Chinese and South Asian.”
1.4 Improve access to services for people with diabetes from disadvantaged groups and disadvantaged areas.

- During 2007/08 Diabetes Managed Clinical Networks should undertake a needs analysis of their population to identify disadvantaged groups (such as asylum seekers, those with learning difficulties, the homeless, travellers, as well as those who may be disadvantaged as a result of the long distances they may need to travel to access services, or as a result of poor transport links). Managed Clinical Network should develop plans to describe the provision of services to meet their needs in terms of diabetes care.

1.5 Ensure that all people with diabetes from minority ethnic communities are able to access diabetes services which are culturally appropriate.

- All NHS Boards will work to improve the collection of data on ethnicity. The ethnicity of patients on the diabetes register will be recorded for over 50% of patients by December 2006 and over 80% by December 2007. Progress in capturing data will be monitored by the Scottish Diabetes Survey.

- The Scottish Executive will publish, by June 2007, diabetes education packages tailored for six minority ethnic communities including Chinese and South Asian.

- Diabetes Managed Clinical Networks will undertake a review of local services and educational initiatives aimed at meeting the needs of people with diabetes from minority ethnic communities. The Scottish Executive will collate a report to be published by March 2008.

(2) Ensure that all people with diabetes have access to effective retinopathy screening.

2.1 Ensure that all people with diabetes are offered annual eye screening to reduce the risk of developing diabetic retinopathy.

- All NHS Boards will fully implement the national diabetic retinopathy screening programme during 2006/07. All NHS Boards will develop local pathways to encourage uptake. All people with diabetes to have had the opportunity to be screened during the year.

- The Diabetes Retinopathy Collaborative will produce a strategy involving the Scottish Executive, Scottish Diabetes Group, National Services Division, Diabetes UK, the Royal National Institute for the Blind and NHS Boards to promote the importance of eye screening which will be implemented during 2006/07.

- The Diabetes Retinopathy Collaborative will publish key performance indicators of the diabetic retinopathy screening programme on a regular basis to monitor delivery.
“All NHS Boards will fully implement the national diabetic retinopathy screening programme during 2006/07.”
3. Enhance patient self-care and self-management by ensuring that all people with diabetes in Scotland have access to appropriate information and education.

3.1 Develop local ‘insulin strategies’ to ensure that individual patients are supported with insulin regimens tailored to suit their needs.

- Each Diabetes Managed Clinical Network will produce, by March 2007, an ‘insulin strategy’ for their area, including an analysis of current patterns of insulin use; identification of how and where insulin initiation is managed; and an examination of local protocols on the intensification of insulin (including the use of insulin pumps).

- The Scottish Diabetes Group will work with Managed Clinical Networks to identify the extent of insulin pump usage in Scotland by September 2006.

3.2 Support self-care of patients with Type 1 diabetes by improving access to structured patient education.

- The Scottish Executive will support work to improve the quality of education available to people with Type 1 diabetes, including funding up to 40 healthcare professionals to undertake training in intensification of insulin management (e.g. DAFNE – Dose Adjustment For Normal Eating).

3.3 Expand access to structured education for people with Type 2 diabetes in order to enhance the patient’s knowledge and confidence in self-care skills.

- Diabetes Managed Clinical Networks should perform an annual survey of all newly-diagnosed patients with Type 2 diabetes to ensure they are offered at least one structured education session (e.g. DESMOND – Diabetes Education and Self-Management for Ongoing and Newly Diagnosed) within three months of diagnosis by local diabetes teams.
The Scottish Executive will support a conference during 2006 as the first part of a concerted effort to increase the awareness and skills of healthcare professionals in delivering structured education for people with both newly diagnosed and established Type 2 diabetes.

3.4 Develop an effective portal for patient and carer information.

- The Scottish Diabetes Group will explore with SHOW, SCI-DC, Diabetes UK, NHS 24, and other stakeholders opportunities to pull together and host the output of patient-focused diabetes information initiatives into one, centrally-managed website.

3.5 Support initiatives to improve patient access to their own electronic medical records.

- The Scottish Diabetes Group, in collaboration with the National eHealth team and SCI-DC, will explore how to give patients access to their own diabetes record and the opportunity to become more involved in their care. Ways of giving patients access to their electronic diabetes record will be investigated and evaluated by April 2007.

3.6 Support the roll out of the patient-led Buddy service.

- The Scottish Executive will provide funding for a further two years to further develop and extend the patient-led Buddy service (a confidential, non-medical support service run by, and for, people with diabetes and carers).
4. Strengthen and develop Diabetes Managed Clinical Networks in order to improve the effectiveness and efficiency of services for people with diabetes.

4.1 Define and improve pathways of care in order to increase access to services and ensure that effective care is delivered as locally as possible.

- The Scottish Executive will commission projects to develop and demonstrate extended professional roles of healthcare staff working in diabetes. Evaluations of the clinical and cost effectiveness of the new roles will be published by September 2008.

- Diabetes Managed Clinical Networks will, by June 2007, map the current pattern of service delivery and produce a strategy for implementing local pathways of care. The Scottish Executive will support Diabetes Clinical Leads to develop and implement local care pathways to redesign services to more effectively meet the needs of patients.

4.2 Diabetes-Managed Clinical Networks to be exemplars for the support of people living with a long-term condition.

- Diabetes Managed Clinical Networks will establish mechanisms by December 2006, to monitor first outpatient appointments, routine outpatient waiting times and Did Not Attend (DNA) rates. This information will be used to investigate DNA rates to explore the reasons why some people do not attend their appointments and to develop methods to reduce non-attendance.

- The Scottish Diabetes Group will work with Diabetes UK and Diabetes Managed Clinical Networks to ensure training and support mechanisms are in place to enable lay members of Managed Clinical Networks to fully participate.
“The Scottish Executive will support Diabetes Clinical Leads to develop and implement local care pathways to redesign services to more effectively meet the needs of patients.”

5) Improve quality of patient data in order to improve clinical management and service planning.

5.1 Comprehensive diabetes registers in place in all NHS Boards.

- In order to improve the completeness of diabetes registers, as well as encouraging earlier diagnosis of diabetes, NHS Boards will, from March 2007, publish the number of people with diabetes on the local register alongside expected prevalence. This will help to identify gaps in service provision and encourage a more proactive approach to case finding.

- By December 2006 over 95% of patients on the diabetes register will have data recorded for Community Health Index, type of diabetes and date of diagnosis. These items act as markers of the completeness of the register. Targets for improved recording of ethnicity data are included under 1.5.

- Managed Clinical Networks will increase the recording of estimated glomerular filtration rate (eGFR), a measure of renal function. By December 2007 over 80% of patients should have a recent record of eGFR.

5.2 Demonstrate real-time data for real-time health care using state-of-the-art eHealth solutions.

- As an exemplar of Chronic Disease Management, diabetes remains an important testing ground for the principles of Scotland’s eHealth Strategy. The SCI-DC clinical management system for diabetes is at the forefront of electronic patient records in Scotland. An updated clinical system for diabetes using the newly-released Generic Clinical System (GCS) Toolkit will be made available by June 2007.
5.3 Maximise the use and utility of the increasingly robust and comprehensive diabetes data.

- The Scottish Diabetes Research Network in collaboration with the Survey Monitoring Group, the Information and Statistics Division (ISD), Chief Scientist Office (CSO), NHS Quality Improvement Scotland, Diabetes UK and the Juvenile Diabetes Research Foundation (JDRF) will develop a policy to maximise use of anonymised diabetes data for audit, research and health service planning. This will involve creation of a robust mechanism to ensure absolute confidentiality, adherence to the Data Protection Act and the highest ethical standards. The result will be a platform for conducting high quality, unobtrusive epidemiological studies of diabetes in Scotland at a national level.

- In order to inform and support improvement in care the number of audits undertaken will be increased. Potential topics for audit include:
  - Patients with high cholesterol and high blood pressure.
  - Lower limb amputation as a consequence of diabetes.
  - Incident rate of CHD/MI and stroke in diabetes.
  - Six-month survival rates after myocardial infarction.
  - Patients with Type 1 diabetes with HbA1c >10.

- The Scottish Executive will fund, during 2006/07, an initiative to facilitate the linkage of diabetes data to SMR data held by the Information and Statistics Division (ISD).

6. Develop and support staff to enhance their knowledge and skills in caring for people with diabetes.

6.1 Support staff to develop their skills.

- The Scottish Executive will publish, by December 2006, the results of a scoping exercise to explore the applicability of work-based assessment to assure competencies.

- Diabetes Managed Clinical Networks will produce, by April 2007, a diabetes education strategy informed by a training needs analysis.

6.2 Improve access to educational support tools.

- The Scottish Diabetes Group will work closely with NHS Education Scotland and the E-Library to develop the Managed Knowledge Network (MKN).

- The capacity of the Scottish diabetes clinical management system (SCI-DC) to provide healthcare professionals with decision support will be improved. This enhanced functionality will be available by June 2007.
(7) Increase diabetes research in Scotland.

7.1 Improve the quality and quantity of internationally competitive diabetes research in Scotland to improve care and treatment as well as working towards a cure for people with diabetes.

- The Scottish Diabetes Research Network will work with the Chief Scientist’s Office to:
  - Develop added functionality within SCI-DC that promotes and supports clinical research and epidemiological studies.
  - Monitor and increase grant income for diabetes research in terms of clinical, laboratory and translational research and increase the number of peer reviewed publications highlighting diabetes research in Scotland.
  - More than double over three years the number of people with diabetes participating in grant-funded clinical trials.
  - Publish a summary of diabetes research activity in Scotland since the implementation of the EU Clinical Trials Directive in 2004, and an overview of other diabetes research conducted since 2000. This will provide a valuable resource and also establish a baseline against which to measure progress.

- The Scottish Diabetes Research Network will work with the Chief Scientist’s Office, the universities and colleges and the Scottish Diabetes Group to host a major research conference in 2008.
“Diabetes Managed Clinical Networks will improve the quality and completeness of data held on Body Mass Index (BMI) and smoking status in order to identify more effectively those most needing to be offered support to adopt a healthier lifestyle.”

8. Support initiatives to promote healthier lifestyles for people with diabetes and for the population as a whole.

8.1 Support people with diabetes to adopt a healthy lifestyle.

- Diabetes Managed Clinical Networks will improve the quality and completeness of data held on Body Mass Index (BMI) and smoking status in order to identify more effectively those most needing to be offered support to adopt a healthier lifestyle. By December 2007, recent data (i.e. within last 15 months) on BMI and smoking status will be available for over 80% of patients.

- Diabetes Managed Clinical Networks will ensure that all healthcare professionals caring for people with diabetes have access to information about locally available health improvement resources such as smoking-cessation services, Counterweight programmes, sport and leisure facilities, healthy eating advice and referral options.

8.2 Support initiatives aimed at improving the health of the people of Scotland.

- Diabetes Managed Clinical Networks will work with other agencies in support of measures which seek to reduce the risk of people developing diabetes.

- Diabetes Managed Clinical Networks should ensure that lessons learned from preventive medicine initiatives, such as Prevention 2010, are applied in the context of diabetes.
(9) Improve the communication and dissemination of information about diabetes in Scotland.

9.1 Provide tools to support the continuous monitoring of diabetes services for quality improvement.

- NHS Quality Improvement Scotland will appoint a co-ordinator to undertake a round of streamlined visits to all NHS Boards to review progress in implementing diabetes standards. A report of the findings will be published by September 2007.

- The Scottish Diabetes Group will work with NHS Quality Improvement Scotland and Diabetes Managed Clinical Networks to develop and implement a real-time online diabetes assessment tool to monitor progress in delivering improved diabetes services. The assessment tool will be in use by March 2008.

- NHS Quality Improvement Scotland will work with Diabetes UK to review the care experience of people living with diabetes. This work will be delivered by March 2007.

- NHS Quality Improvement Scotland will review and update the content of the diabetes clinical standards in the wider context of their work on long-term chronic conditions. This work will be delivered by September 2008.

9.2 Review and update SIGN guidelines on diabetes.

- The Scottish Intercollegiate Guidelines Network (SIGN) will plan and implement a timetable to review and republish the guideline on diabetes to ensure that it takes account of the latest evidence.

9.3 Increase awareness of national and local initiatives to improve diabetes care.

- The Scottish Executive will develop a strategy to make it easier for people with diabetes and healthcare professionals to keep up to date with developments in diabetes including the publication of Progress Reports in 2007 and 2009.

- The Scottish Executive, in partnership with the Scottish Diabetes Group, Diabetes UK and the Scottish Diabetes Industry Group, will host a major professional conference on diabetes in November 2006.
“DAFNE (Dose Adjustment for Normal Eating) is an intensive 5-day group education programme for people with Type 1 diabetes. The approach teaches people how to match insulin doses to food on a meal by meal basis using a normal diet.”
**DiabNet: Delivering better care to children with diabetes**

DiabNet is an innovative approach to the delivery of services across Tayside, Fife and Forth Valley for children and young people with diabetes. DiabNet provides consistent, co-ordinated, high quality care and support for children with diabetes and their families. Joint working between the three areas allows families to access services, such as a specialist 24-hour helpline, that otherwise would not have been available in the individual NHS Board areas. Closer collaboration has also improved communications and led to the setting up of new clinics and support groups. As a result of DiabNet, episodes of acute complications of diabetes and hospital admission rates have been greatly reduced, and home management of children and adolescents with newly diagnosed diabetes has been improved.

**Improving patient education with DAFNE**

DAFNE (Dose Adjustment for Normal Eating) is an intensive 5-day group education programme for people with Type 1 diabetes. The approach teaches people how to match insulin doses to food on a meal by meal basis using a normal diet. This ultimately leads to improvement in their control of diabetes and their quality of life. DAFNE is crucially different from traditional education initiatives in its capacity to promote autonomy and confidence in the individual’s capacity to manage their own diabetes and make choices about their health. Three sites have been funded by the Scottish Executive to train staff and run DAFNE courses for patients. Feedback from patients and staff at all the centres has been universally positive.

**The Scottish Diabetes Buddy Service**

The Scottish Diabetes Buddy Service is a confidential, non-medical support service provided for people with diabetes and their carers. The service is staffed and run on a voluntary basis by trained patients and carers, with a grant from the Scottish Executive and administrative support from local diabetes-managed clinical networks.

The Buddy Service, which was piloted in four areas (Grampian, Lothian, Tayside and Fife), offers patients the chance to talk to someone with similar experiences about coping with diabetes and its impact. In areas where the service is offered patients can be put in touch with a trained buddy via a telephone call to the local diabetes managed clinical network office. Tailored advice is available face-to-face, by telephone, by letter, by email or by text.

"An excellent service provided at a time I felt very vulnerable (at diagnosis).”

Person with Type 2 diabetes.

“There was a real breakthrough for me, giving me confidence and information to contact further help at a very difficult time. Thank you with gratitude.” Person with Type 2 diabetes.

“I found this service to be very informing and useful in coming to terms with my son’s diabetes.”

Parent of a teenager with diabetes.
**Patient conferences in Fife**

Local conferences for people with diabetes have become a key tool in the involvement and education of patients in Fife as means to engage with patients and carers and to listen to their concerns. The success of the conferences has been based on a partnership between the local Diabetes UK support group and health care professionals in Fife.

The conferences started as an all-Fife annual event but as a result of their enormous success (over 400 people attended a single event in 2004 with many more wishing to attend), it was decided to organise several conferences throughout the region. The four local conferences being held in Fife this year will enable the education message to reach three times as many people.

Evaluation of these events has been very positive both from patients and carers and from health care professionals who have welcomed the opportunity to reach a large group of patients throughout the one day to pass on their knowledge and to listen to the comments of people with diabetes away from the clinical setting.

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**New Roles: Tayside Podiatry Practitioner Post**

A new podiatry practitioner role was introduced as a champion for diabetes foot care to promote the confidence of all podiatrists in managing patients by developing a support network. It has also been described as creating a podiatry micro-network within the main Diabetes Managed Clinical Network. In Tayside, 34 podiatrists are involved in the programme. A needs analysis has resulted in attendance at specialist foot clinics providing instruction on dressings, risk stratification, referral pathways and key links, with hands on assistance in the management of difficult diabetes clinical problems in their own environment/clinic. An education package has also been developed to help understand what patients go through when referred for vascular assessment or for amputation.
“A new podiatry practitioner role was introduced as a champion for diabetes foot care to promote the confidence of all podiatrists in managing patients by developing a support network.”

**Foot Ulcer Risk Stratification**

A community-based foot-risk stratification programme was developed and endorsed by the SIGN guidelines in 2001. The programme is evidence based, and supported by the Scottish Diabetes Group and SCI-DC. It uses five simple clinical criteria to categorise patients as high, moderate or low risk of foot ulceration on an annual basis. High-risk patients have an 83-fold increased risk, and moderate risk a 6-fold increased risk of foot ulceration compared to low-risk patients. Low-risk patients had a more than 99% chance of remaining ulcer-free in over two years follow-up. This validated risk stratification allows scarce podiatry resources to be directed towards those at greatest need. SCI-DC has developed a web-based page to enable easy recording and sharing of this clinical data.

**Developing future leaders of diabetes research**

Scientific leadership is critical to the advancement and conduct of clinical research. A lack of such leadership in clinical diabetes research, particularly at the level of professor, has been widely acknowledged to have had a detrimental impact on diabetes research in Scotland. There is no quick fix to this problem and the solution is for Scotland to invest in promising and committed individuals and develop its own pool of clinical researchers with the relevant expertise.

The Chief Scientist Office (CSO) has funded two clinician scientist posts in diabetes research; one co-funded with NHS Education Scotland (Dr Ewan Pearson, Dundee) and the other co-funded with the charity Diabetes UK (Dr Steven Miller, Glasgow). These are prestigious awards which support a doctor who is committed to clinical research, is already trained to PhD level, and has the potential to become a future leader in diabetes research. These two investments (approximately £1 million in total) will make an enormous contribution towards raising the academic profile of clinical diabetes research in Scotland.
**Innovation in research: Automated grading of retinal images**

Diabetic eye disease is the leading cause of blindness in the UK working-age population. The Scottish Executive Health Department is working with NHS Boards to implement systematic annual screening for diabetic eye disease, known as retinopathy, using digital photography. A multidisciplinary team led by Dr John Olson has recently completed a project funded by the Chief Scientist Office to develop and evaluate software to detect diabetic eye disease. This two-year project studied retinal images from over 6,700 people with diabetes attending Grampian’s Diabetes Retinal Screening Programme, the largest ever study of its type. Software was developed to detect automatically photographs with any retinopathy or which were too poor quality to grade. The evaluation showed that the software, developed by the Biomedical Physics Ophthalmic Imaging Group, is safe, effective and should reduce the workload for manual checking of images by around 60%, potentially saving the NHS in Scotland over £200,000 per year. This research was awarded the 2005 Foulds trophy by the Royal College of Ophthalmologists and the 2006 Young Diabetes Investigator Award by Diabetes UK.

**Developing Leaders of Diabetes Services**

The Diabetes Team in Lothian received the Health Foundation’s Shared Leadership for Change award in 2005. This initiative from one of the UK’s leading charitable foundations for healthcare, aims to support leadership development for teams as a means to improve the quality of care for people with diabetes. The shared leadership initiative, which involves six centres throughout the UK, is aimed at whole teams, rather than individuals, recognising that all team members need to be involved to improve the way the team works. The award has enabled the Lothian Diabetes Team to work with external experts to review how they work together and to develop a clearer vision for future services. The initiative provides opportunities to obtain high quality leadership training and to learn from other teams dealing with similar issues.
"The Diabetes Team in Lothian received the Health Foundation’s Shared Leadership for Change award in 2005."

**Tayside Diabetes Education Programme**

Collaboration between clinical and IT Team Members in Tayside has led to an exciting and innovative development benefiting people newly diagnosed with Type 2 Diabetes and their carers.

The Tayside Diabetes Education Program (TDEP) provides structured, professionally-led, group education sessions for newly-diagnosed patients. Groups operate in Angus, Dundee and Perth on a regular basis, led by specially trained nurses and dieticians. They allow patients and their carers to meet within two weeks of diagnosis, to receive high quality information and advice about their condition and how this will affect them.

Using an innovative on-line booking system similar to that used in on-line airline booking systems, patients can be given a date and time for a TDEP session when they are first seen in the Practice after diagnosis. The session can be booked electronically by the GP or Practice Nurse, through the Network website, whilst the patient is with them in the consulting room. This enables the patient to choose to attend an education session on a day and time which suits them, and to attend six to eight weeks sooner than is possible using traditional booking methods.
“As a result of DiabNet, episodes of acute complications of diabetes and hospital admission rates have been greatly reduced, and home management of children and adolescents with newly diagnosed diabetes has been improved.”
New Approach to Foot Care in the Western Isles

The Western Isles, in common with many other areas in Scotland, identified that people with diabetes were not all being offered effective screening for diabetic foot problems. In 2003, only 35.9% of the diabetic population were screened. The Diabetes-Managed Clinical Network, in collaboration with the Public Health Department, funded a pilot project to link annual foot screening with the highly successful annual retinal screening program, which has screened between 80-93% of the diabetic population since its introduction. In September 2004, a pilot project combining retinal and foot screening was implemented in five of the 15 GP practices. This enabled the team to address the requirement set out in the Scottish Diabetes Framework for an individual baseline (including vascular assessment, neurological assessment, and assessment of function and deformity) to be established for each patient.

Patients who attended the retinal screening van were offered an annual foot screening carried out by podiatrists. Over 98% of patients thought the joint screening was beneficial, saving them time and travel. 40.3% of those screened required podiatric treatment, which was subsequently provided. This programme is now being rolled out by the Diabetes Managed Clinical Network with the aim to include all patients attending for retinal screening.

Giving Patients Access to their Own Information

A collaborative effort between Tayside, Fife and Lanarkshire has resulted in diabetes patients now obtaining a printed summary of their personal information held within their diabetes record (SCI-DC).

These summaries contain key information on blood-pressure control, currently prescribed medication and summaries of goals agreed with the healthcare professional. In addition, the summaries incorporate nationally agreed advice on how patients can reach their goals, and what care they should expect over the course of a year. The information generated forms part of a patient’s electronic record within SCI-DC and is shared as part of the clinical review process with other members of the patient’s multidisciplinary diabetes team.

This work will allow patients to be clearly aware of their clinical progress and to become more active participants in their care through involvement with goals setting and by becoming empowered to act positively in the management of their diabetes. It is anticipated that this development will act as a first step towards patients accessing their own personal information electronically.

We are grateful to the people with diabetes and members of staff from Ayrshire, Fife, Glasgow, Grampian, Lothan and Tayside for their help with the photographs. Photographer: Colin D. Read.