

Tayside  
Diabetes  
MCN

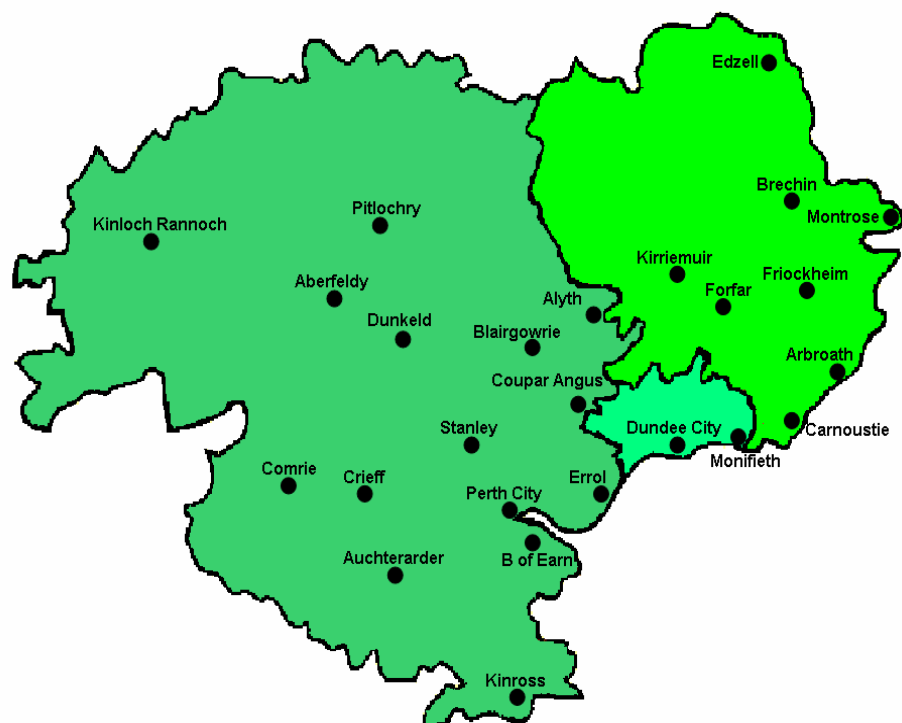


# Improving treatment and care for people with diabetes in Tayside

*The Annual Report of NHS Tayside  
Diabetes Managed Clinical Network  
2009/10*

[www.diabetes-healthnet.ac.uk](http://www.diabetes-healthnet.ac.uk)

The Tayside Diabetes Managed Clinical Network (MCN) brings people living with diabetes together with healthcare professionals from primary and secondary care to agree the best way to care for people with diabetes. The aim is that every person with diabetes receives the same high quality care wherever they may live.



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# Summary

Welcome to the 9th Tayside Diabetes Managed Clinical Network (MCN) Annual Report. The aim of this report is to provide a comprehensive overview of the activities of the MCN during 2009/10.

As at 31 March 2010 there were 18,355 people living with diabetes in Tayside, a prevalence of 4.6%. This is a 5.5% increase over the previous year. This increasing trend reflects what is happening national and internationally.

The Diabetes MCN continues to provide an established model to facilitate collaborative working and patient involvement in order to achieve improvements in care for people with diabetes. Some of these key achievements are:

- Very high numbers of people with diabetes receiving regular checks and achieving treatment goals despite the increasing number of people with diabetes.
- Extension and ongoing monitoring of a Local Enhanced Service for People with Type 2 diabetes as part of the Scottish Enhanced Services Programme. This ensures that
  - people diagnosed from 1 January 2007 onwards are managed in line with the Tayside Integrated Care Pathway for Diabetes
  - people newly diagnosed are referred for structured group education
  - foot risk scores are recorded annually
  - people with low risk foot scores are educated in foot care
- Third patient and carer event held in May 2009 giving around

160 people the opportunity to learn more about their diabetes and how to look after themselves.

- Continued development of educational initiatives for patients through Tayside Diabetes Education Programme, Insulin Management Programme and Footstep, working towards meeting the NICE Education Criteria for structured education.
- Continued provision of educational opportunities to promote skills and competencies for healthcare professionals including Biennial MCN Conference attended by around 200 people, University of Dundee certificate level course in diabetes care and a range of education evening meetings in each locality throughout the year.

**Dr Alistair Emslie-Smith**  
**Lead Clinician, Tayside Diabetes Managed Clinical Network**

**Elaine Wilson**  
**Manager, Tayside Diabetes Managed Clinical Network**

# Making Strategy a Reality

2009-10 has been a period of change for NHS Tayside and MCNs. NHS Tayside has undertaken a process of reorganisation to move to a more integrated system of healthcare. The aim of this is to strengthen the relationship between primary and secondary care to support the shifting the balance of care agenda, improve productivity and efficiency and strengthen the nursing structure.

As part of this process a Best Value Review of local MCNs within NHS Tayside was undertaken and reported at the end of March 2009. Its recommendations reflected the need to encourage better vertical working, across the whole system to address the wider determinants of health and ensure the most effective and efficient use of resources to deliver modern sustainable services.

As a result of the review in September 2009 the management of local MCNs moved from the Board's Centre for MCNs to the newly formed Planned Care Team of the Medical Directorate in the Delivery Unit.

The focus of the MCN's work continued to be the promises set out in the Diabetes Collaborative Commissioning Plan:

1. All people newly diagnosed with Type 2 diabetes will have access to quality assured, structured education through the Tayside Diabetes Education Programme (TDEP) within one month of diagnosis.
2. At least 75% of people with diabetes will have a foot risk score formally calculated annually.
3. All people with diabetes will have access to appropriate state registered podiatry services as indicated by their foot risk.
4. All people with diabetes will have appropriate access to Health

Profession Council (HPC) registered dietetic services in line with agreed Tayside-wide standards.

5. All people with diabetes will be managed in line with agreed "Tayside Care Pathway for Patients with Diabetes".
6. All appropriate people with Type 1 diabetes will have access to intensive management instruction via the Tayside Insulin Management Programme (TIM) where appropriate.
7. All people with diabetes will be offered annual eye screening by digital retinal photography.

These promises are complemented by a range of supporting priorities including:

- continuing programme of professional education
- supporting integrated working through protocols and patient information
- rolling programme of audit and quality assurance.

Work undertaken to deliver the promises and progress against each of these is contained throughout the various sections of this report. The MCN reported on the progress of the promises to NHS Tayside's Improvement and Quality Committee in December 2009.

This work has been underpinned by the Triple Aim approach adopted within NHS Tayside to improve:

- the health of a defined population – people with diabetes
- the experience of care for people with diabetes
- the cost per capita of providing care for people with diabetes.

The delivery of many of these promises contributes to the delivery of the Long Term Conditions National Action Plan and NHS Tayside's Long Term Conditions Plan including:

- developing relevant education to support people to manage their long term condition
- shifting the balance of care to ensure that care is provided by the most appropriate person, service and place to suit people's needs.

### **Contributing to local and national priorities and strategy**

Dr Alistair Emslie-Smith, MCN Lead Clinician is a member of the newly formed Joint Clinical Board for the Medical Directorate of NHS Tayside which provides a focus for quality and improvement and the pursuit of waste, variation and harm. The Board has focused on the management of long term conditions, older people, pathways and community services to support crisis care. Members of the MCN have also contributed to the following national groups:

- Professor Graham Leese, Chair of Scottish Foot Action Group, member of SIGN Guideline Steering Group and Chair of SIGN Guideline Visual Impairment Sub-Group
- Dr John Petrie, Chair of Scottish Diabetes Research Network, member of SIGN Guideline Steering Group and Chair of SIGN Guideline Type 2 Diabetes Sub-Group
- Dr Alistair Emslie-Smith, Chair of SCI-DC, member of Scottish Diabetes Group and member of SIGN Guideline Cardiovascular Sub-Group
- Dr Ewan Pearson, member of SIGN Guideline Type 2 Diabetes Sub-Group
- Dr Ellie Dow, member of SIGN Guideline Cardiovascular Sub-Group
- Dr Alasdair Mackie, member of SIGN Guideline Visual Impairment Sub-Group
- Dr Graham Cormack, member of SIGN Guideline Visual

### Impairment Sub-Group

- Dr Vicky Alexander, member of Scottish Diabetes Education Advisory Group, member of Scottish Diabetes Psychology Working Group, member Scottish Type 1 Diabetes Short Life Working Group
- Dr Alistair Dutton, member of Scottish Diabetes Education Advisory Group
- Dr Iain Spence, member of Scottish Diabetes Care Focus Group, member of Scottish Diabetes Education Advisory Group, member Scottish Type 1 Diabetes Short Life Working Group
- Elaine Wilson, member of Scottish Diabetes Group, member of Scottish Diabetes Retinal Screening Collaborative
- Ritchie McAlpine, member of Scottish Diabetes Survey Monitoring Group
- Dr Geraldine Brennan, member of Scottish Diabetes Inpatient Group
- Debbie Voight, member of Scottish Diabetes Inpatient Group
- Mary Robertson, member of Scottish Diabetes Education Network.

# Involving People with Diabetes

2009/10 was another very active year for the Diabetes MCN Patient Council whose numbers were further enhanced by another 8 people joining the group.

To support new members and further develop the Patient Council, a Diabetes Voices training event was held in March 2010 attended by 10 people. Diabetes Voices is a course run by Diabetes UK which prepares people with diabetes to take an active part in the work of MCNs.

Issues discussed by the Patient Council during 2009-10 included:

- Annual Patient and Carer Event – evaluation and planning
- Patient Stories
- Healthy Eating Patient Information
- Information packs for people newly diagnosed with Type 2 diabetes
- Change in HbA1c reporting
- Scottish Diabetes Action Plan
- Buddy Service
- Scottish Diabetes Patient Focus Group
- Annual Workplan for Patient Council
- Disposal of Sharps

Following collaborative work between the Patient Council and Diabetes Dietitians Group, an improved version of the patient information leaflet on Healthy Eating was agreed. This was updated on the Tayside Diabetes MCN Patient Information Section, in the Workbook for Tayside Diabetes Education Programme and information pack for people newly diagnosed with Type 2 diabetes

Building on the third successful patient and carer event in May 2009 (see page 6), the Patient Council spent considerable time and effort planning the next event in May 2010. The Council takes a very active role in the planning and delivery of the event, demonstrating their desire and ability to lead on developments for the MCN.

The Patient Council once again asked people with diabetes to share their experience of living with diabetes or the care that they receive. Responses were received from 41 people with diabetes and covered a range of aspects including the emotions of being diagnosed, practical challenges of following healthy lifestyle choices but also acknowledging the excellent diabetes care they receive from their health care teams. This information is considered and used by the Patient Council to agree priorities for action.

Other activities undertaken by the Patient Council included:

- Commented on draft Scottish Diabetes Action Plan.
- Patient Council Chairman presented to Tayside Blood Borne Virus MCN Patient Group to share experience on patient involvement in an MCN.
- Commented on proposed letter from Specialist Diabetes Service to patients to improve patient focused communication.
- Patient Council Chairman presented to Dundee Diabetes UK Support Group to share experience of patient involvement in an MCN.
- Contributed to review of Tayside Diabetes Specialist Nurse phone line to improve the service.
- Contributed to Tayside Paediatric Diabetes Team Parent

Support Day.

- Commented on SIGN Diabetes Guideline Patient document.
- Commented on letter to people with diabetes on the differences between diabetic retinopathy screening and optometry appointments and emphasise the importance of attending both.

Members of the Patient Council continue to provide valuable input to the Diabetes MCN Network Board and Implementation Group. Members were also invited to NHS Tayside Lay Representative Reception in November where the Chairman of Mr Sandy Watson, thanked patients and carers for taking the time to become involved in health services in Tayside.

## Supporting Self Care

We have continued to develop and provide a range of initiatives to provide people with diabetes with the knowledge and skills they need to manage their condition effectively.

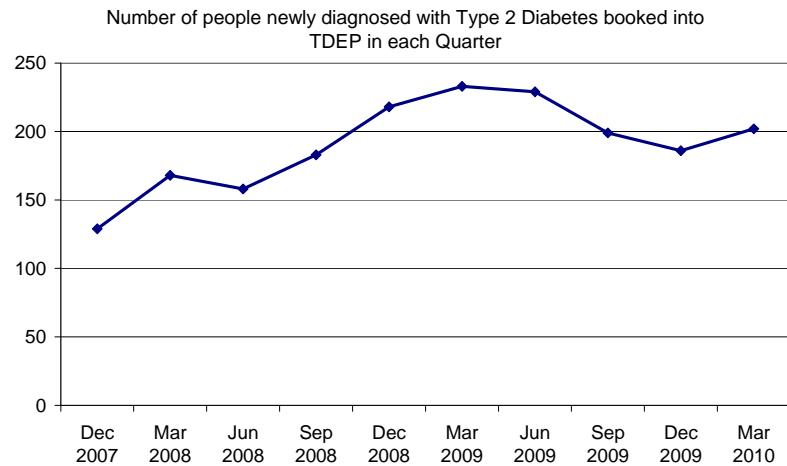
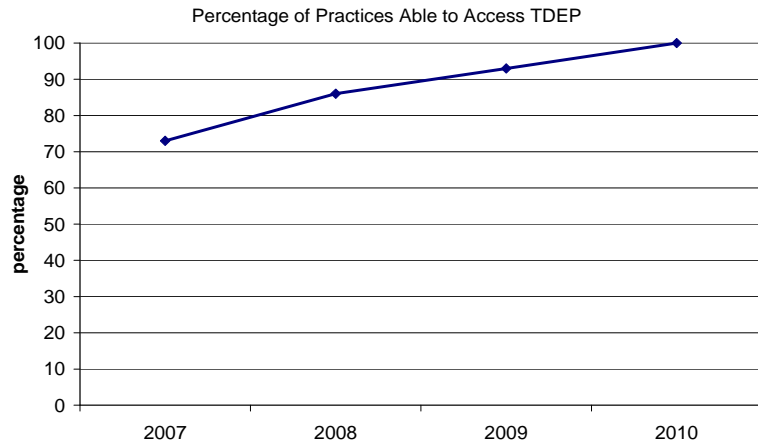
### **Semi-Automated Patient Held Summary**

This summary contains key information on blood-pressure control, medication information and summaries of goals agreed during a consultation. The summary can be printed out by the healthcare professional and given to the patient. Efforts continued to ensure that as many people as possible know about the summary and can have access to it. The MCN has promoted the patient held summary at professional and patient events. Further work is continuing to allow access to this information on an electronic basis in a user friendly format.

### **Tayside Diabetes Education Programme (TDEP)**

The Tayside Diabetes Education Programme (TDEP), which provides structured group education for people who are newly diagnosed with Type 2 diabetes, has successfully continued.

In the short term resource has been agreed until March 2011 as part of the Local Enhanced Service funding to enhance delivery of TDEP. A diabetes patient educator took up post in October 2008 to provide sessions in Dundee and Perth & Kinross. In Angus the funding has been used to support practice and community staff to deliver the sessions. During 2009/10 additional sessions were commenced in Crieff and Blairgowrie enabling all practices across Tayside to access TDEP.



Disappointingly the number of people who accessed TDEP in 2009/10 decreased slightly, as shown in the graph above. This decrease is being addressed through feedback to practices and raising awareness of the programme. Work is ongoing to explore long term resourcing of the programme.

### Tayside Insulin Management Programme (TIM)

The Tayside Insulin Management Programme is a high quality person-centred structured education programme in intensive insulin therapy and self management where people with Type 1 diabetes learn how to match their insulin dose to their chosen food intake on a meal by meal basis.

The number of programmes run and people attending in 2009-10 is set out below. Two courses were cancelled in 2009-10 due to lack of uptake. Since then, the referral pathway and course documentation has been reviewed to improve uptake.

	No of sessions	No of people
2007-08	9	63
2008-09	11	84
2009-10	8	60

All attendees reported that they found the course “Excellent” or “Good”.

98% said the pace of the course was just right.

98% said the length of the sessions were just right.

99% found the topics covered within the sessions “Useful” or “Very Useful”.

91% reported that the sessions had met their expectations.

Analysis of the Quality of Life questionnaires shows an improvement in patients’ perceptions of the negative effects diabetes has on aspects of their life particularly in the areas of physical ability, holidays, travelling, worries about the future and

freedom to eat as one wish.

A successful proposal was submitted to Scottish Diabetes Group in August 2009 to further develop TIM to meet NICE Criteria for structured education was supported. Funding will be provided to support learning resources, audit and quality assurance.

### **Patient and Carer Event**

The third diabetes education event for people with diabetes and carers across Tayside was held in May in the new venue of the University of Dundee Dalhousie Building. Around 160 people attended and heard from local healthcare professionals about a range of issues. It was also an opportunity to meet and chat with other people with diabetes and carers.

There was extremely positive feedback from the event with many welcoming the opportunity to interact with other people with diabetes and carers and share ideas. Many of the delegates also commented on the quality of the presentations and workshops and this was also demonstrated by the number of questions asked and the difficulty in getting people to leave workshops! The majority of delegates reported that they had learnt something new and would wish to attend future events. The Patient Council are currently

planning the next up and coming event in May 2010.



### **Angus CHP Type 2 Group Education Update**

This community based programme is delivered jointly by a dietitian and diabetes nurse adviser within local health centres. The sessions are designed to be informal and encourage patient participation and exchange of personal experiences. Group members have an opportunity to identify their own learning needs, so specific issues of individual concern can be addressed. At each session, patients and carers are able to discuss a variety of topics related to living with diabetes and each patient is issued with an education pack. Feedback on the programme from both patients and health care professionals has been very positive.

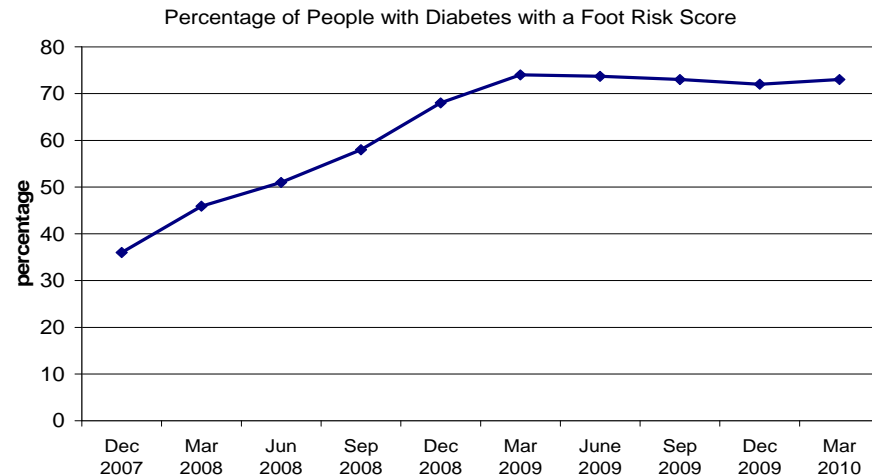
The programme won an award in the Primary Care category at the Scottish Diabetes Conference in March 2010.

### **Angus Long Term Conditions Event**

Angus Community Health Partnership held an event for those affected by Long Term Conditions in Forfar in May 2009. Various stands and workshops were available to give out leaflets, information and advice to the public on health topics including smoking cessation, sensible drinking, mental health and wellbeing, physical activity and nutrition. The Diabetes Specialist Nurses and Dietitians participated in the day. In excess of 300 people attended throughout the day with very positive feedback.

# Podiatry

The Local Enhanced Service for Diabetes agreed in Tayside includes the use of the SCI-DC foot risk tool (see page 10). Since the introduction of the Enhanced Service the recording of a foot risk score for people with diabetes has more than doubled.



Footstep is a group education programme for suitable people with diabetes with low foot risk. It aims to educate and empower them to manage their own foot care confidently and competently. During 2009-10 106 people with diabetes attended the footstep training. 88% reported that the education had helped them to better understand foot problems and 86% that they were more confident in managing their own feet and all were aware of when to contact a podiatrist.

The Foot Sub-Group chaired by Specialist Podiatrist, Brian McMurray continues to meet on a regular basis to provide a forum for discussion and sharing of best practice in relation to diabetes foot care

# Dietetics

The Diabetes Sub-Group of the Tayside Nutrition and Dietetics Network, meets on a regular basis to actively work towards providing a clinically effective and equitable service. A number of new initiatives have been offered this year which include nutrition link nurse training for ward staff and practical workshops for medical students.

The Group undertook an audit of access to dietetic services during November 2009 against the guidelines which were agreed in 2008-09. The audit showed that on the whole access was in line with the guidance in terms of clinical criteria and waiting times in particular for those areas which were deemed essential. The main areas where it was not met were desirable; weight management and ongoing education programmes.

The Dietitians continue to contribute to the delivery of the TDEP and TIM programmes (see pages 4 & 5) and to professional training and conferences organised by the MCN. A number of new initiatives have been offered this year which include nutrition link nurse training for ward staff and practical workshops for medical students.

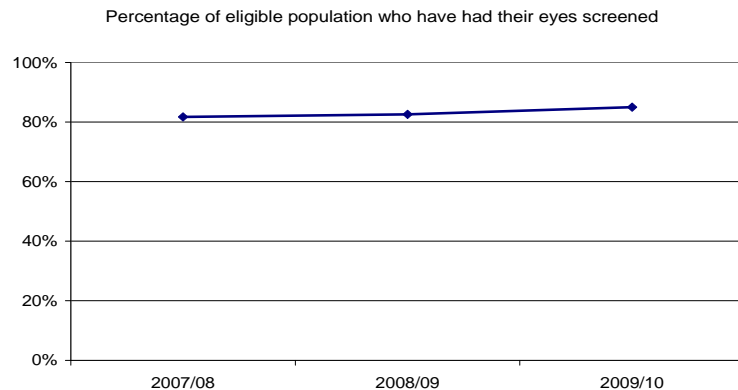


# Retinopathy Screening

Tayside has in place a comprehensive screening service provided from static sites at Ninewells and Perth Royal Infirmary from 2 mobile vans covering all other areas in Perthshire & Kinross and Angus.



87% of all eligible patients had their eyes screened during 2009/10.



Slit lamp screening clinics have been redesigned and commenced in April 2009. This will prevent people being lost to follow up and ensure accuracy in National reporting.

The Retinopathy Sub-Group chaired by Dr Graham Leese continues to oversee the development of the Diabetic Retinopathy Screening Programme.

## Primary Care

The MCN aims to ensure that primary care clinicians have access to support to enable them to provide appropriate and quality assured care for people with diabetes.

Figures published for the Quality and Outcomes Framework for 2008-09 showed that GPs in Tayside are reviewing patients and recording their clinical information to a very high standard. Tayside GPs achieved 99.7% of the maximum available points for diabetes against a national average of 99.2%.

The Local Enhanced Service for Diabetes agreed as part of the Scottish Enhanced Services Programme supports general practices to provide care for people diagnosed with Type 2 diabetes including:

- people diagnosed from 1 January 2007 onwards are managed in line with the Tayside Integrated Care Pathway for Diabetes
- people newly diagnosed are referred for structured group education
- foot risk scores are recorded annually
- people with low risk foot scores are educated in foot care

# Inpatient Care

Hypo boxes have been introduced into wards across Ninewells in order to improve knowledge of hypoglycaemia, causes, treatment and prevention. An audit of hypo boxes in 40 wards in Ninewells Hospital was undertaken in 2009 which showed:

- Hypo boxes were available in all wards
- Staff were able to immediately identify the location of the box
- All boxes had an appropriate treatment for hypoglycaemia and treatment guidelines available.
- 82 % boxes were fully stocked.
- There was a positive and timely response from all wards where any item was missing from the hypo box and all boxes were fully stocked by the same or next day.

Hypo boxes are currently being implemented across Perth Royal Infirmary.

The Scottish Diabetic Ketoacidosis (DKA) Protocol was introduced in Ninewells Hospital. Two independent audits of DKA care identified an unacceptable level of compliance of 31.5% with the protocol in relation to fluid replacement, monitoring, potassium replacement and continuation of basal insulin. An Integrated Care Pathway (ICP) was developed and implemented across Ninewells Hospital. A follow up audit in 2009 showed that the compliance with target measures for DKA management improved to at least 82% across the hospital. Further improvement work is planned in order to improve compliance and reliability of care. This work has been used to inform the new National DKA bundles.

An audit of diabetes management in the peri-operative period also identified areas of suboptimal management, especially in

relation to medication and insulin. An updated Peri-operative Diabetes Management Guideline has been tested in a number of surgical wards in Ninewells Hospital following this, with support from the Diabetes Specialist Nurse Team. This work will be rolled out to Perth Royal Infirmary in the coming year.

## Children and Young Adults

The Tayside Children's Diabetes service continues to work in collaboration with children's diabetes services in Fife and Forth Valley (DiabNet), resulting in adoption of uniform clinical guidelines and service evaluation. The nurses from all 3 Health Board areas continued to staff the emergency telephone help-line for children and their families for use out-of-hours. This continues to be an important source of support for many. As a direct result of this many fewer children are being admitted to the children's ward with the acute complications of diabetes.

There has been a continued move to using more intensive insulin regimens-including insulin pump therapy with over 80% of patients on intensive insulin therapy. The team have worked closely with schools to help support children with diabetes at school, including administration of an insulin injection at lunchtime. There is recognition that to get the full benefits of a more intensive programme much more education with respect to insulin adjustment for CHO and blood glucose levels needs to be given. This remains a significant challenge for the service.

The team held a successful Parent Support Day in October 2009 for parents and families of children with diabetes. The morning provided information on what's new in children's diabetes, understanding HbA1c, patient experience of Living with Type 1

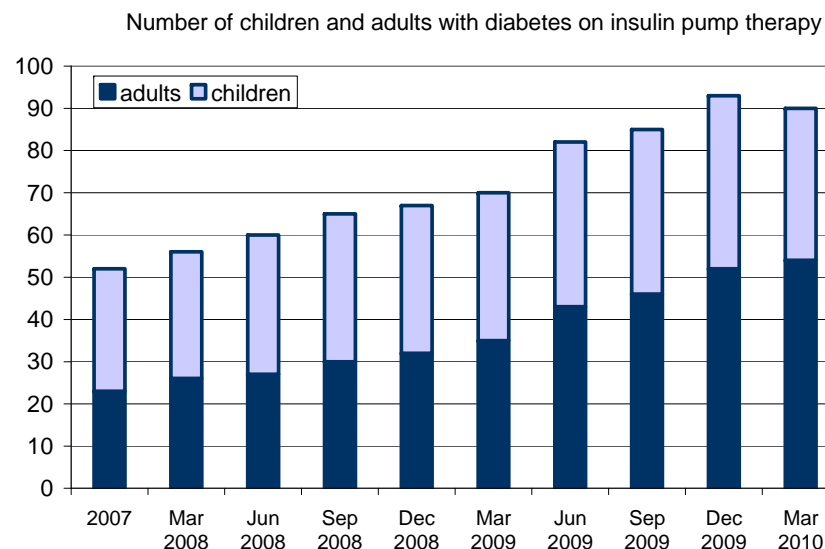
diabetes, and support groups. Although in its early stages the meeting has facilitated the development of a local Parent Support Group. A group of 12-16 year olds with type 1 diabetes spent a day at the Blue Sky experiences centre in November. Activities included team-building and Wii Olympics. The day went very well and there are plans to repeat this in November 2010.

## Intensification of Insulin

As at March 2010, 90 people were on insulin pump therapy in Tayside. The usage of insulin pump therapy continues to be monitored on an ongoing basis.

Intensive insulin management education, the Tayside Insulin Management Programme (page 21) has been rolled out. Patients assessed as suitable for pump therapy must undertake intensive insulin management education before being commenced on pump therapy. A multidisciplinary insulin pump clinic is held at Ninewells for the adult service.

The Children's Diabetes Service has also developed a clinical insulin pump service and now over 15% of the children with diabetes in Tayside are on this therapy. This makes us one of the largest paediatric pump centres in the UK.



# Education

The MCN aims to make available a range of appropriate and relevant educational opportunities.

## Biennial Diabetes MCN Conference

This was our 6<sup>th</sup> Tayside Biennial Diabetes Clinical Network Conference and it celebrated 10 years since the MCN's inaugural Conference. This anniversary was celebrated with a really special event where we returned to the magnificent setting of Perth Concert Hall and welcomed 170 healthcare professionals from across Tayside who shared an interest in diabetes. The Conference spanned all aspects of modern diabetes care and the programme comprised of a wide mix of top quality speakers and interactive workshops.

## Dundee Diabetes Course

A further professional learning module in caring for people with Diabetes was held in 2009/10. The course, delivered jointly by The University of Dundee and Tayside Diabetes MCN, gives healthcare professionals the practical knowledge and skills necessary to provide an effective and efficient service for people with diabetes.

## Locality Forum Groups

The forums held in Angus, Dundee and Perth & Kinross continue to provide a varied programme for the multi-professional and inter-agency teams involved with diabetes care across Tayside. Seven meetings were held during 2009/10 attended by around 252 healthcare professionals. The vast majority of attendees reported that the meetings were of relevance to their educational needs and that the quality of the education was good or excellent.

## Ward Education

The Diabetes Specialist Nurses have provided intensive education in diabetes management for Staff Nurses working on the acute medical unit at Perth Royal Infirmary over a two year period. The aim was to improve the knowledge, skills and understanding of this staff group. 36 nurses undertook the programme and evaluation has been very positive with

- The majority stating their increased understanding of diabetes had increased their confidence in the diabetes care they provide.
- Their increased diabetes knowledge had been cascaded by those attending the programme, to the benefit of patients.
- Participants reported changes in practice in relation to the prevention, treatment and management of hypoglycaemia and hyperglycaemic episodes.

## Ad hoc training

The Specialist Diabetes Team provided an education session on diabetes as part of the Angus Community Health Partnership Protected Learning Time in November 2009.

Diabetes Specialist Nurses and Dietitians have provided education for groups of district nurses, nursing home and social work staff as and when requested. There is also the opportunity for staff to attend out patient clinics or group education sessions.

## **Ethnic Minority and Disadvantaged Groups**

In order to inform the planning of future services to meet needs, the MCN has been recording the ethnicity of people with diabetes. This information has been collected through the Retinopathy Screening Programme. To date ethnicity information is now available for 73% of people with diabetes.

A recent study published by the Universities of Edinburgh and Dundee showed that of 10,500 people with Type 2 diabetes in Tayside, 176 were South Asian. The study found evidence of equity in many aspects of diabetes care for South Asians in Tayside.

## **NHS QIS Follow-Up Review**

The MCN continues to address through its workplan the NHS QIS Diabetes Standards which were not met, see table on next page.

<b>Criteria</b>	<b>Reason not met</b>	<b>Action</b>
<b>ESSENTIAL</b>		
<b>Standard 1.2 – Organisation: IM&amp;T, Clinical Management Systems, Audit and Monitoring</b>		
Data interfaces are in place between primary and acute care such that a single data entry covers all recording needs.	There is no facility to back-populate data from SCI-DC (the national clinical information system for diabetes) into the primary care systems, resulting in double data entry.	This criterion will not be met until the national SCI-DC system fully interfaces with all other relevant NHS information systems. Outwith NHS Tayside's control.
<b>Standard 4.1 – Clinical Review</b>		
There is a protocol to ensure that all people with diabetes are offered review of the specified indicators on an annual basis, or more frequently where clinically indicated, from diagnosis.	Quality and Outcomes Framework (QOF) data for 2005-06 was used to assess and support the recording of the relevant indicators with 90% being considered an acceptable achievement rate. 85% was achieved for microalbuminuria testing.	This improved to 89% in the latest QOF data published for 2008-09 following the review by NHS QIS.
<b>Standard 7.2 – Clinical Management: Feet</b>		
All people with diabetes have appropriate access to state registered podiatry services.	There is variable access to podiatry services provision across NHS Tayside, across both primary and secondary care as a result of resource constraints.	Patients with high risk feet are targeted through a risk stratification matrix and criteria for access to specialist services. Further work is being undertaken through the Diabetes Collaborative Commissioning Plan looking at where people receive their foot care across community and specialist services, staff competencies and capacity.
<b>Standard 9.3 Clinical Management: Renal</b>		
All people with Type 1 diabetes, with microalbuminuria as defined in a local protocol, are prescribed an ACE inhibitor unless there are contraindications.	Insufficient Evidence. Data taken from SCI-DC was not reliable as does not allow accurate audit of drug usage. QOF data records that 80% of people with microalbuminuria have been prescribed an ACE inhibitor but this does not distinguish between Type 1 and Type 2 diabetes.	Planned developments with SCI-DC should enable this to be audited in future. Further work is being undertaken locally to extrapolate information.

<b>DESIRABLE</b>		
<b>Standard 1.5 Organisation: IM&amp;T, Clinical Management Systems, Audit and Monitoring</b>		
The computerised clinical management system is Board-wide and incorporates call and recall systems for Screening /review of complications.	With the exception of eye screening SCI-DC does not have a call and recall function and there are no plans to develop this functionality. As a consequence, this criterion cannot be 'met'.	Outwith NHS Tayside's control.
<b>Standard 3.5 Patient Focus</b>		
People with diabetes have appropriate access to identified key health professionals including state registered podiatry and dietetic, nursing and psychology services.	<p><u>Dietetics</u> Dietetic services have been redesigned but there remains variable access across NHS Tayside, there is no specialist diabetes dietetic service in Perth &amp; Kinross.</p> <p><u>Psychology</u> There is no dedicated adult diabetes psychology service available. 0.1 WTE is available for the paediatric diabetes service.</p>	<p><u>Dietetics</u> Perth &amp; Kinross Community Health Partnership have appointed a Specialist Diabetes Dietitian.</p> <p><u>Psychology</u> NHS Tayside participated in the training for diabetes staff in behaviour change methods and identifying depression and anxiety funded by the Scottish Diabetes Group. Course run in May 2009. The MCN advertises to staff the Health Behaviour Change courses run by NHS Tayside.</p>
<b>Standard 7.4 – Clinical Management: Feet</b>		
All people with diabetic foot ulcers are reviewed by a diabetes foot specialist, using digital camera photographs for comparison.	It is not routine practice to photograph all diabetic foot ulcers. Staff reported a lack of national guidance in relation to use of digital cameras, resolution of photographs, size of image, etc. Issues were noted with the printing of digital photographs, and electronic storage of photographic images.	SCI-DC have developed and are piloting foot screens as part of the new Generic Clinical System development of the national SCI-DC programme, there will be the ability to store photographic images within this upgraded system.
<b>Standard 10.4 – Clinical Management: Acute Management</b>		
The rate of diabetic emergencies is monitored for all those with diabetes in the area.	Information on patients admitted to hospital with diabetes related conditions is available through SMR. At present there is no ongoing routine mechanism for monitoring diabetic emergencies.	A mechanism to monitor diabetes emergencies i.e. Diabetic Ketoacidosis (DKA) and Hypoglycaemia using biochemistry data has been developed and the robustness of this process is being tested.

# Research

## **The Wellcome Trust United Kingdom Type 2 Diabetes Genetics Consortium Case Control Collection**

This world-leading research project involving 15,000 participants in Tayside and led by Professor Andrew Morris is almost complete and is poised to expand into other Health Board areas. It has contributed to the identification of key genes that predispose to diabetes and obesity, for example the *FTO* gene which can result in a 70% higher risk of being obese. In collaboration with international colleagues, the Dundee group have rapidly described a series of other important genetic variants, including in four separate Nature Genetics publications in the first half of 2008.

## **Scottish Diabetes Research Network**

The SDRN was established with its hub in Dundee in 2006 with a mission to enhance the quality and quantity of diabetes research in Scotland. It now manages a portfolio of more than 80 diabetes research studies with many of these funded by major bodies such as the Medical Research Council, the British Heart Foundation, The Wellcome Trust, and the Chief Scientist Office. Clinical trials are also being sponsored by 10 different pharmaceutical companies in Scotland. Under the leadership of Dr John Petrie, SDRN has established a national Research Register of people with diabetes who have given permission to be contacted with a view to participating in research projects. Many of the patient participants were recruited with the assistance of GPs and their colleagues within local Managed Clinical Networks. SDRN has produced an acclaimed DVD in which people with diabetes talk about their clinical trial participation (view at [www.sdrn.org.uk](http://www.sdrn.org.uk)). SDRN is also working to establish comprehensive systems for unintrusive epidemiological research in diabetes at a national level in consort with the Health Informatics Centre at the University of Dundee.

## **Translational Medicine Research Consortium**

This initiative continues to develop a world-leading network of clinical and scientific excellence throughout Scotland and is based at the University of Dundee. The TMRC is a unique collaboration involving 4 Scottish universities, 4 NHS trusts, Scottish Enterprise and Wyeth, a top ten global pharmaceutical company. It is now funding patient-oriented research relevant to the development of new treatments for diabetes, including complementary projects looking at factors predicting adverse responses to “glitazones” led by Dr John Petrie and Professor Chim Lang which are under way in Dundee (£700,000).



# Publications and Presentations

## Publications

- Adherence in patients transferred from immediate release metformin to a sustained release formulation: a population-based study. Donnelly LA, Morris AD, Pearson ER. *Diabetes Obes Metab.* 2009 Apr;11(4):338-42.
- The Y402H variant of complement factor H is associated with age-related macular degeneration but not with diabetic retinal disease in the Go-DARTS study. Doney AS, Leese GP, Olson J, Morris AD, Palmer CN. *Diabet Med.* 2009 May;26(5):460-5.
- Is there equity of service delivery and intermediate outcomes in South Asians with type 2 diabetes? Analysis of DARTS database and summary of UK publications. Fischbacher CM, Bhopal R, Steiner M, Morris AD, Chalmers J. *J Public Health (Oxf).* 2009 Jun;31(2):239-49.
- Decreasing amputation rates in patients with diabetes-a population-based study. Schofield CJ, Yu N, Jain AS, Leese GP. *Diabet Med.* 2009 Aug;26(8):773-7
- The role of modifiable pre-pregnancy risk factors in preventing adverse fetal outcomes among women with type 1 and type 2 diabetes. Inkster ME, Fahey TP, Donnan PT, Leese GP, Mires GJ, Murphy DJ. *Acta Obstet Gynecol Scand.* 2009;88(10):1153-7.
- New users of metformin are at low risk of incident cancer: a cohort study among people with type 2 diabetes. Libby G, Donnelly LA, Donnan PT, Alessi DR, Morris AD, Evans JM. *Diabetes Care.* 2009 Sep;32(9):1620-5.
- A cohort study of the risk of cancer associated with type 2 diabetes. Ogunleye AA, Ogston SA, Morris AD, Evans JM *Br J Cancer.* 2009 Oct 6;101(7):1199-201.
- Do managed clinical networks improve quality of diabetes care? Evidence from a retrospective mixed methods evaluation.

Greene A, Pagliari C, Cunningham S, Donnan P, Evans J, Emslie-Smith A, Morris A, Guthrie B. *Qual Saf Health Care.* 2009 Dec;18(6):456-61.

- Which people with Type 2 diabetes achieve good control of intermediate outcomes? Population database study in a UK region. Guthrie B, Emslie-Smith A, Morris AD. *Diabet Med.* 2009 Dec;26(12):1269-76.

## Presentations

- NHS Tayside Diabetes Managed Clinical Network - Ten Years On. A 'single system' approach to integrated diabetes care. (poster), Diabetes in Scotland Conference, March 2010
- DiabNet: Providing access to out of hours diabetes advice for families with children with diabetes (poster), Diabetes in Scotland Conference, March 2010

# Future Priorities

The Diabetes MCN will continue to work towards delivering the Diabetes Collaborative Commissioning Promises

1. All people newly diagnosed with Type 2 diabetes will have access to quality assured, structured education through the Tayside Diabetes Education Programme (TDEP) within 1 month of diagnosis.
2. At least 75% of people with diabetes will have a foot risk score formally calculated annually.
3. All people with diabetes will have access to appropriate state registered podiatry services as indicated by their foot risk score.
4. All people with diabetes will have appropriate access to registered dietetic services in line with agreed Tayside-wide standards.
5. All people with diabetes will be managed in line with agreed "Tayside Care Pathway for Patients with Diabetes".
6. All appropriate people with Type 1 diabetes will have access to intensive management instruction via the Tayside Insulin Management Programme (TIM).
7. All people with diabetes will be offered annual eye screening by digital retinal photography.

SIGN 116 Management of Diabetes was published on 23 March 2010.

The updated Scottish Diabetes Action Plan is due for publication during 2010.

The MCN will take on board actions and recommendations from both these documents and incorporate as necessary into future priorities.

# Clinical Outcomes and Process Information

## Presentation of information

This report has been derived from information held on the Tayside section of the Scottish Care Information - Diabetes Collaboration (SCI-DC) network and focuses on diabetes care and clinical status during the period 01/01/2009 - 31/03/2010 (15-month report period).

The figures presented in this document have been calculated using 15-month time frames compatible with the Scottish Diabetes Survey and GMS contact methodologies.

## Demographics

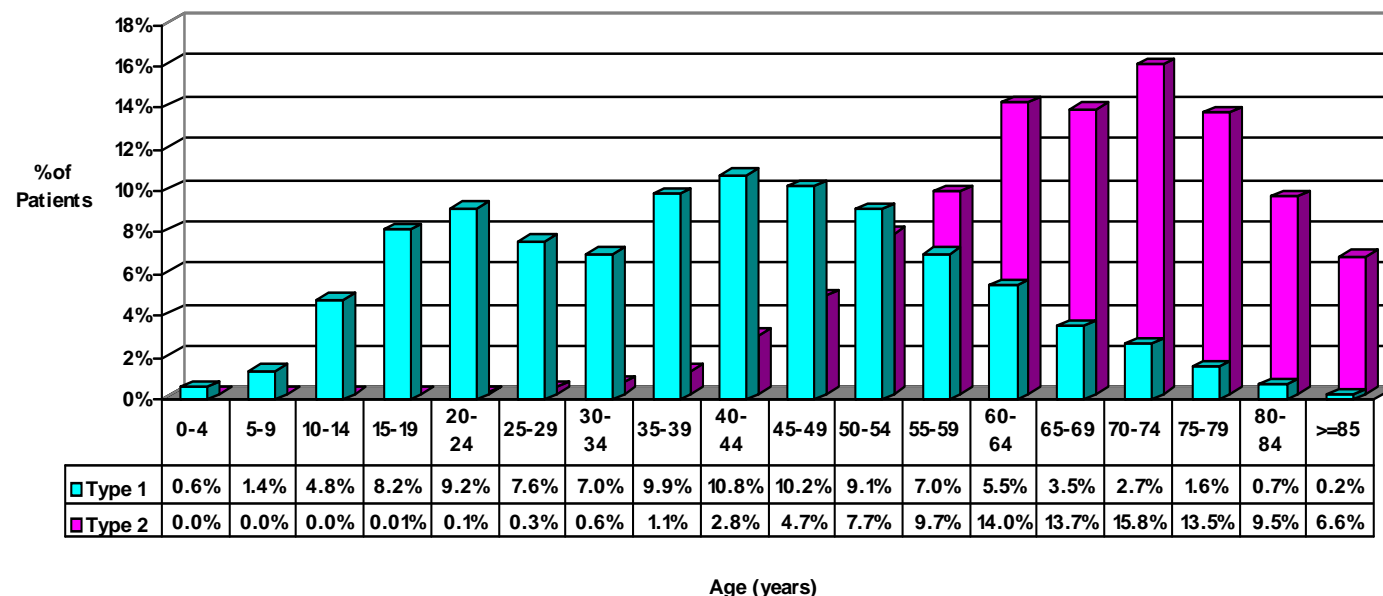
Prevalence of diabetes was calculated using the estimated mid-year 2008 Tayside NHS Board population as defined by the Register General for Scotland (n= **396942**).

**Table 1: Age distribution and population prevalence of diabetes in Tayside on 31/03/2010**

Age range	Tayside population	Type 1 Diabetes		Type 2 Diabetes		Total prevalence
		Type 1 population	Type 1 prevalence	Type 2 population	Type 2 prevalence	
Unknown	0	0	0.0%	0	0.0%	0.0%
0-4	20809	11	0.05%	0	0.0%	0.1%
5-14	42748	113	0.3%	0	0.0%	0.3%
15 - 24	53137	313	0.6%	20	0.0%	0.6%
25 - 34	43185	261	0.6%	134	0.3%	0.9%
35 - 44	54006	372	0.7%	642	1.2%	1.9%
45 - 54	55883	346	0.6%	2052	3.7%	4.3%
55 - 64	52016	224	0.4%	3922	7.5%	8.0%
65 - 74	39368	111	0.3%	4892	12.4%	12.7%
75 - 84	26348	41	0.2%	3812	14.5%	14.6%
>= 85	9442	4	0.0%	1085	11.5%	11.5%
<b>Total</b>	<b>396942</b>	<b>1796</b>	<b>0.5%</b>	<b>16559</b>	<b>4.2%</b>	<b>4.6%</b>

- **Type 1 (n=1796) : Type 2 (n=16559) : All diabetes (n=18355)**
- **9.8% were type 1 and 90.2% were type 2 patients**
- **Prevalence of type 1 diabetes was 0.5%**
- **Prevalence of type 2 diabetes was 4.2%**
- **Overall prevalence of diabetes was 4.6%**

**Figure 1: Age distribution as a percentage of diabetes Type 1 in Tayside on 31/03/2010 (n=18355)**



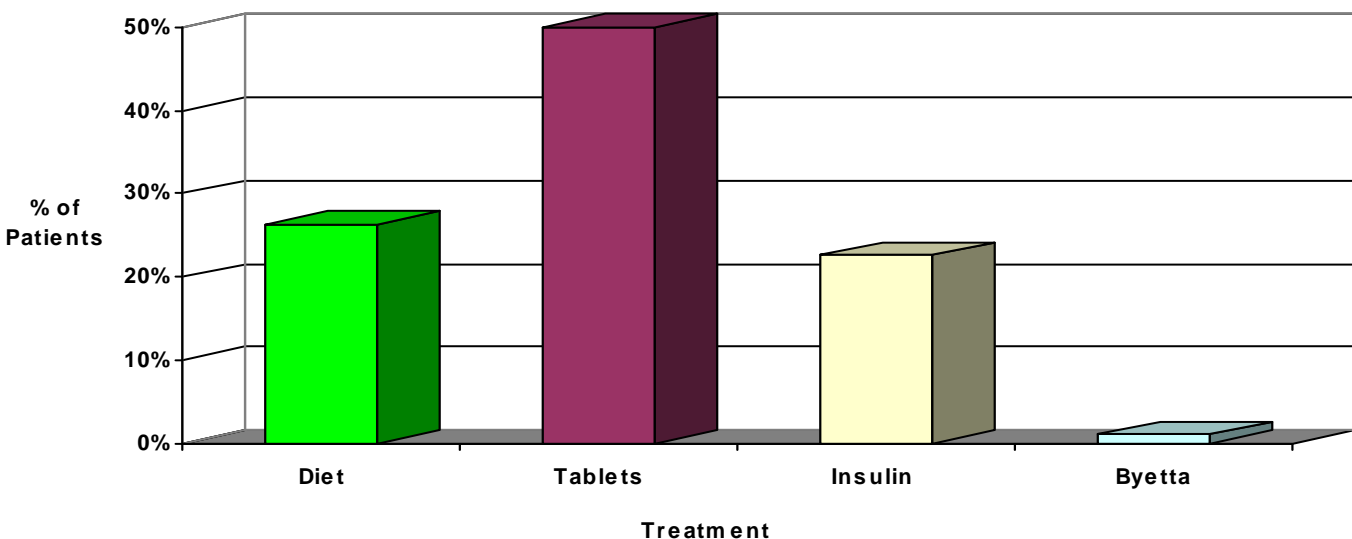
- Age range (type 1) was 3-94 years: mean age was 39.7 years
- Age range (type 2) was 18-102 years: mean age was 66.8 years
- Age range (total population) was 3-102 years: mean age was 64.2 years

**Table 2: Incidence of diabetes recorded by the Tayside diabetes network during the calendar year of 2009**

	Diabetes Type		
	Type 1	Type 2	Total
(n)	58	1568	1626
Incidence (%)	0.02%	0.41%	0.43%

## Treatment

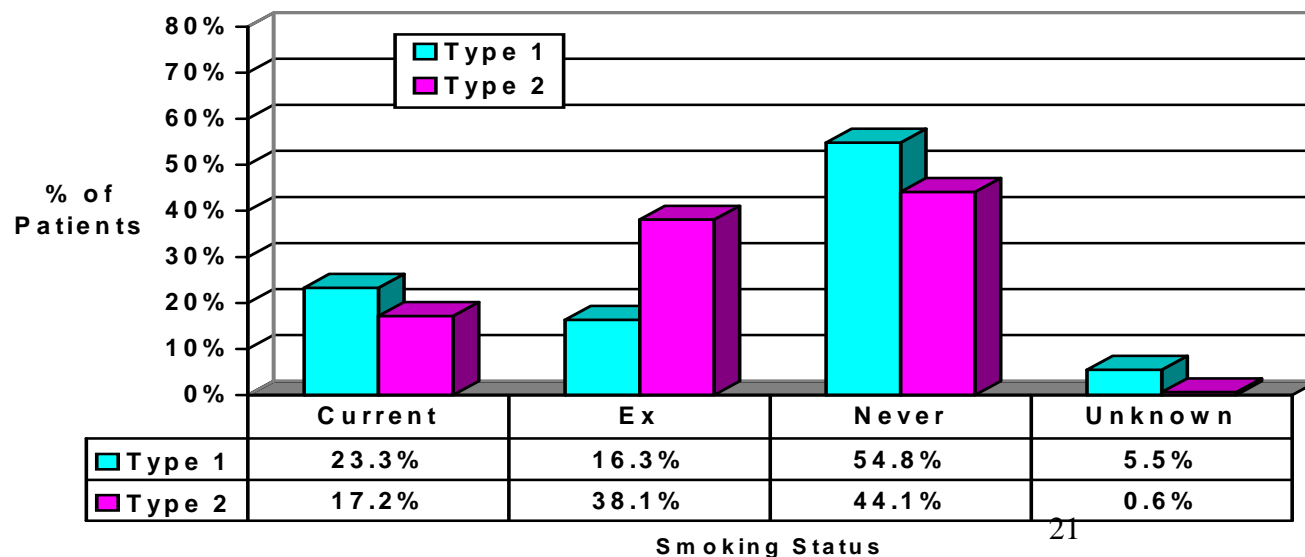
Figure 2: Breakdown of most treatment as a percentage of the total diabetes population used in this report (n= 18355)



- 22.6% (n=41051) of patients with diabetes were treated with insulin (Either insulin alone or in combination with oral hypoglycaemic drugs)
- 14.2% (n=2355) of type 2 patients were treated with insulin
- 55.5% (n= 9197) of type 2 patients were treated with oral hypoglycaemic drugs
- 29.1% (n=4819) of type 2 patients were controlled by dietary measures alone
- 1.1% (n=188) of type 2 patients were treated with Byetta (Exenatide)

## Smoking

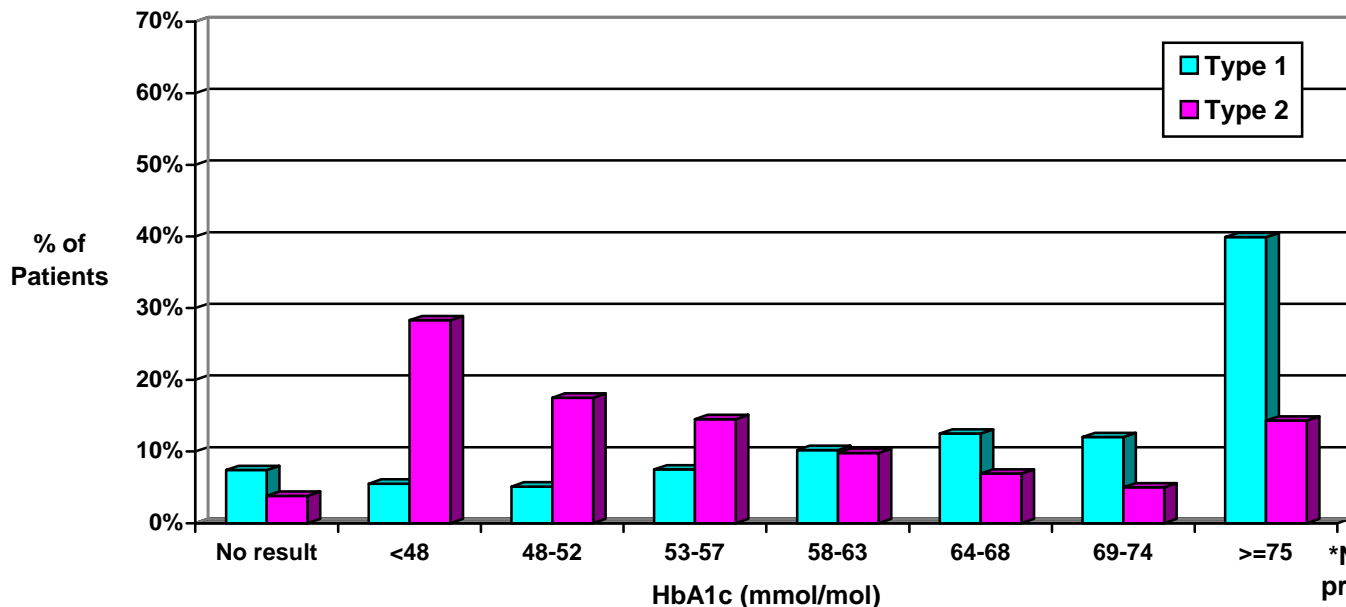
Figure 3: Most recent smoking status as a percentage of type 1 and type 2 diabetes (n= 18355)



- 23.3% (n= 419) of type 1 patients and 17.2% (n= 2853) of type 2 patients were current smokers
- 16.3% (n= 293) of type 1 patients and 38.1% (n= 6306) of type 2 patients were ex-smokers
- 54.8% (n= 985) of type 1 patients and 44.1% (n= 7300) of type 2 patients had never smoked
- The smoking status of 5.5% (n=99) of type 1 and 1.1% (n=100) of type 2 patients was unknown

## Clinical Indicators

Figure 4: Most recent HbA1c values recorded during the report period (01/01/2009 – 31/03/2010) shown as a percentage of type 1 and type 2 diabetes (n= 18355).



- 95.9% (n=17601) of patients had an HbA1c test in the report period.

- Of those tested during the report period, 19.5% (n=325) of type 1 patients and 62.6% (n=9975) of type 2 patients had HbA1c values less than 58 mmol/mol (7.5%)

- Mean HbA1c value in type 1 patients was 74 mmol/mol (8.9%) (Range = 21–174 mmol/mol (4.1-18.1 %))

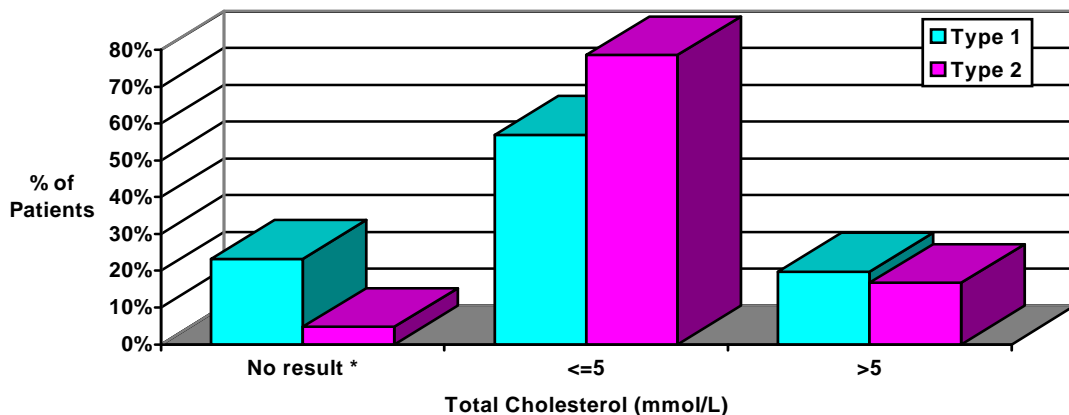
- Mean HbA1c value in type 2 patients was 58 mmol/mol (7.5%) (Range = 19–187 mmol/mol (3.9-19.3 %))

- Mean HbA1c (total tested population) was 59 mmol/mol (7.5%) (Range = 19–187 mmol/mol (3.9-19.3 %))

\*No Result is where no value was recorded or the last value was prior to the report period

**Haemoglobin A1c (HbA1c)** tests measure the average amount of sugar being carried in blood over the past 2-3 months. Targets are agreed for each individual but in general good control is between 48 and 58mmol/mol

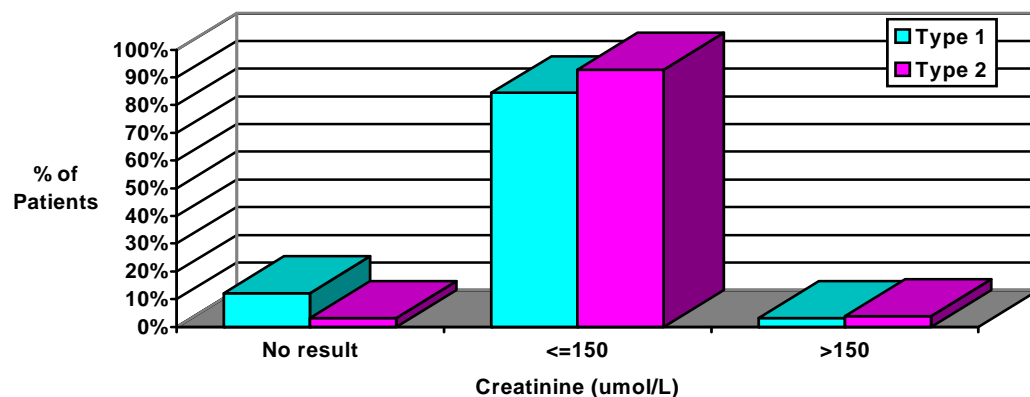
**Figure 5: Most recent total Cholesterol values recorded during the report period (01/01/2009-31/03/2010) shown as a percentage of type 1 and type 2 diabetes (n=18355)**



- 93.5% (n=17156) of patients had a total cholesterol test during the report period
- Of those tested during the report period, 74.3% (n=1024) of type 1 patients and 82.4% (n=13008) of type 2 patients had a total cholesterol value of 5 mmol/L or less.
- Mean type 1 total cholesterol value was 4.5 mmol/L (Range = 1.8–9.6 mmol/L)
- Mean type 2 total cholesterol value was 4.2 mmol/L (Range = 1.6–16.9 mmol/L)
- Mean total cholesterol value (total tested population) was 4.3 mmol/L (Range = 1.6–16.9 mmol/L)

**Cholesterol** is a fat carried in the blood, a value of less than 5mmol/L is clinically desirable.

**Figure 6: Most recent total Creatinine values recorded during the report period (01/01/2009 – 31/03/2010) shown as a percentage of type 1 and type 2 diabetes (n= 18355).**

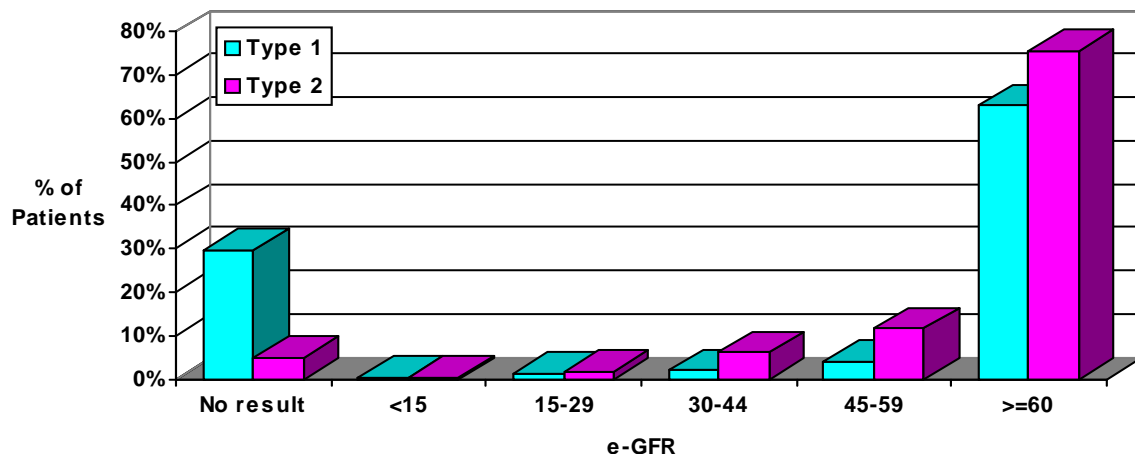


- 95.9% (n= 17600) of patients had a Creatinine test during the report period
- Of those tested during the report period, 96.3% (n=1518) of type 1 patients and 96.0% (n=15381) of type 2 patients had Creatinine value <=150 umol/L
- Mean type 1 Creatinine value was 81.3 umol/L (Range = 27–986 umol/L)
- Mean type 2 Creatinine value was 87.9 umol/L (Range = 20–1419 umol/L)
- Mean Creatinine value (total tested population) was 87.3 umol/L (Range = 20–1419 umol/L)

**Creatinine** is a waste product that is expelled from the body in the urine. A creatinine value of 150 umol/L or less is clinically desirable.

\*No Result is where no value was found or the last value was prior to the report period

**Figure 7: Most recent total e-GFR values recorded during the report period (01/01/2009 – 31-3/2010) shown as a percentage of type 1 and type 2 diabetes (n-18355)**



- 93.1% (n= 17084) of patients had an eGFR test during the report period
- Of those tested during the report period, 89.4% (n=1151) of type 1 patients and 77.0% (n=15796) of type 2 patients had eGFR values >=60 (Stage 1 or 2)

\*No Result is where no value was found or the last value was prior to the report period

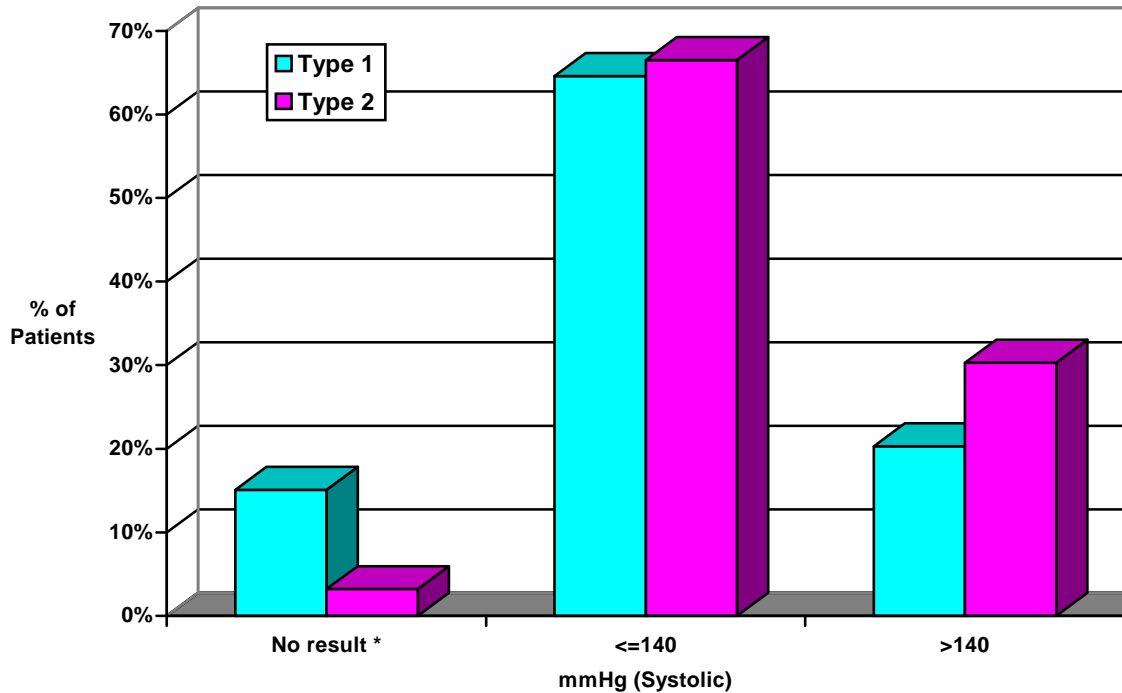
NOTE Tayside laboratories limit upward eGFR results to >=60 (Stage 1 or 2)

Stage	eGFR	Description	Treatment Stage
1	90+	Normal kidney function but urine findings or structural abnormalities or genetic trait point to kidney disease	Observation, control of blood pressure.
2	60-89	Mildly reduced kidney function, and other findings (as for stage 1) point to kidney disease	Observation, control of blood pressure and risk factors.
3A	45-59	Moderately reduced kidney function	Observation, control of blood pressure and risk factors.
3B	30-44	Moderately reduced kidney function	Observation, control of blood pressure and risk factors.
4	15-29	Severely reduced kidney function	Planning for endstage renal failure. Urgent referral or discussion or routine referral if known to be stable.
5	<15	Very severe, or endstage kidney failure (sometimes call established renal failure)	Treatment choices. Immediate discussion and referral to Renal Physician.

**Estimated Glomerular Filtration Rate (eGFR )** is a new Renal Function tests which is calculated from serum creatinine concentration, age, and sex. The most widely used method for this is termed “the abbreviated MDRD equation”, and this has proved to be both robust and accurate. GFR in healthy individuals is approximately 100 mL/min/1.73m<sup>2</sup>.

## Blood Pressure

Figure 8: Most recent SYSTOLIC blood pressure values recorded during the report period (01/01/2009 – 31/03/2010) shown as a percentage of type 1 and type 2 diabetes (n= 18355)

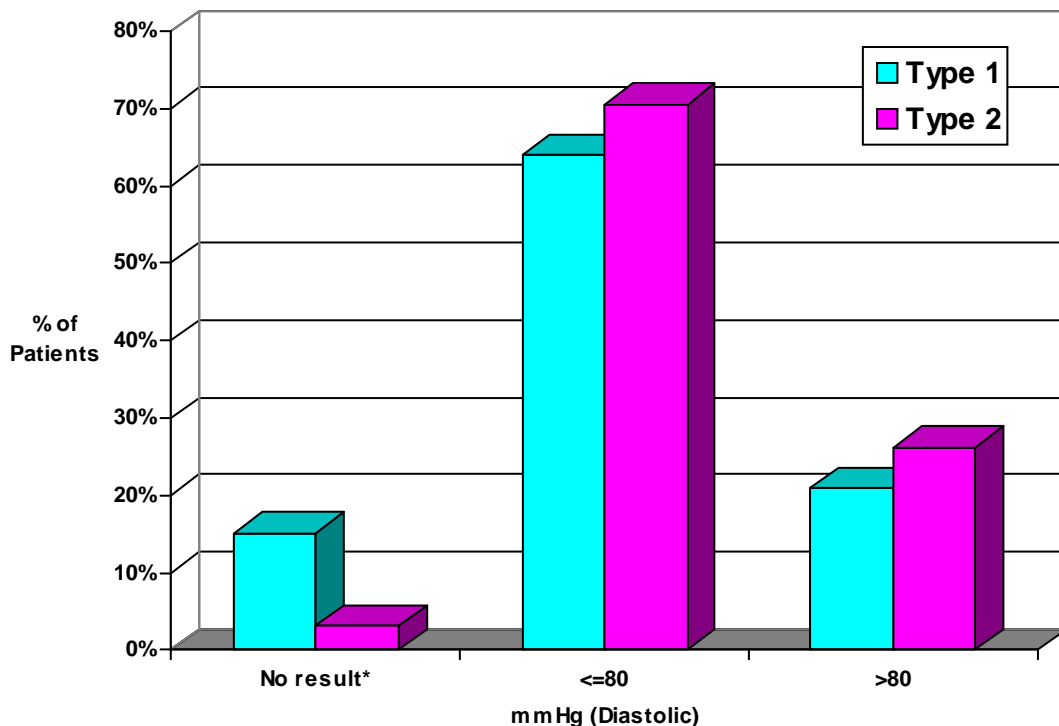


- 95.6% (n=17556) of patients had a blood pressure check during the report period
- Of those tested during the report period, 76.1% (n=1160) of type 1 patients and 68.7% (n=11010) of type 2 patients had a systolic value of 140 mmHg or less.
- Mean systolic blood pressure value in type 1 patients was 131.3 mmHg (Range = 80–201 mmHg)
- Mean systolic blood pressure value in type 2 patients was 135.9 mmHg (Range = 60–234 mmHg)
- Mean systolic blood pressure value (total tested population) was 135.5 mmHg (Range = 60–234 mmHg)

\*No Result is where no value was found or the last value was prior to the report period

**High blood pressure (BP) or hypertension** is common in people with diabetes. For most patients, Systolic Blood Pressure (the top value) should be: 140 mmHg or less and Diastolic Blood Pressure (the bottom value) should be: 80 mmHg or less

**Figure 9: Most recent DIASTOLIC blood pressure values recorded during the report period (01/01/2009 – 31/03/2010) shown as a percentage of type 1 and type 2 diabetes (n= 18355).**



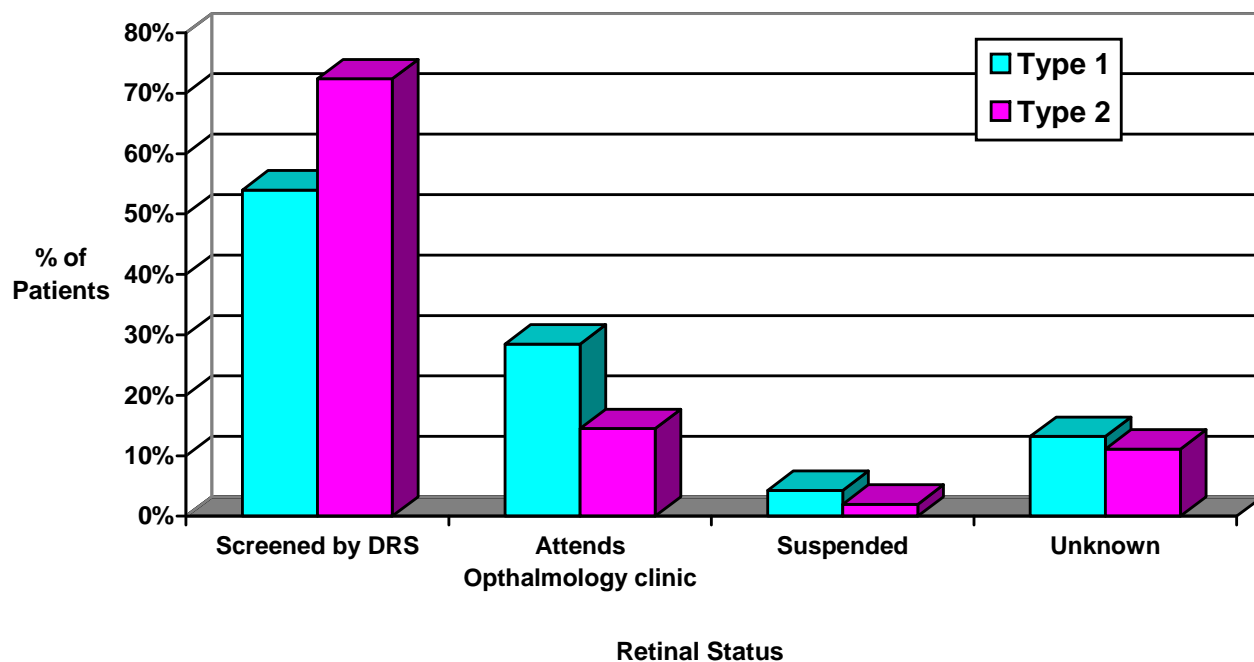
- 95.6% (n=17556) of patients had a blood pressure check during the report period
- Of those tested during the report period, 75.4% (n=1150) of type 1 patients and 73.0% (n=11696) of type 2 patients had a diastolic value of 80 mmHg or less
- Mean diastolic blood pressure value in type 1 patients was 74.6 mmHg (Range = 30–110 mmHg)
- Mean diastolic blood pressure value in type 2 patients was 75.2 mmHg (Range = 33–136 mmHg)
- Mean diastolic blood pressure value (total tested population) was 75.0 mmHg (Range = 30–136 mmHg)

\*No Result is where no value was found or the last value was prior to the report period

*For the above blood pressure data, systolic and diastolic blood pressure values were analysed separately. From this information, theoretical mean blood pressure values (systolic/diastolic) for type 1 and type 2 diabetic populations can be produced. These, rounded to the nearest full number, are shown below:*

- Type 1 mean blood pressure = 131/75 mmHg
- Type 2 mean blood pressure = 136/75 mmHg

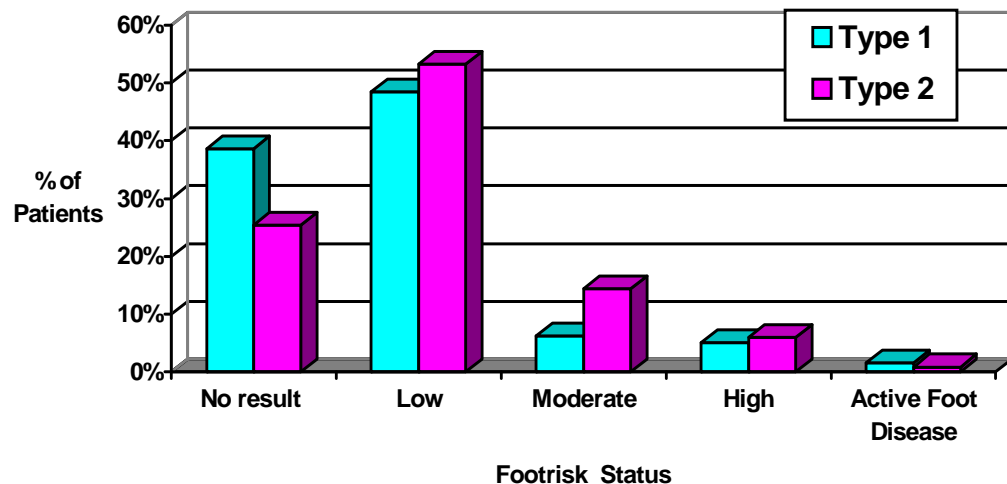
Figure 10: Most recent Retinal status recorded during the report period (01/01/2009 – 31/03/2010) shown as a percentage of type 1 and type 2 diabetes (n= 18355).



- 88.7% (n= 16285) of patients were appropriately catered for in regard to eye care (i.e. they were either screened, attending ophthalmology or were clinically suspended from screening)
- 15874 patients (86.5%) were screened or were attending an ophthalmology clinic
- After excluding clinically suspended patients and those attending ophthalmology (n=3319), there were 15036 patients eligible for eye-screening. Of these, 12966 (86.2%) were screened in the report period.

Everyone with diabetes runs the risk of developing an eye disease called **Diabetic Retinopathy**. Development or progression of diabetic retinopathy can be prevented by good control of blood sugar and blood pressure.

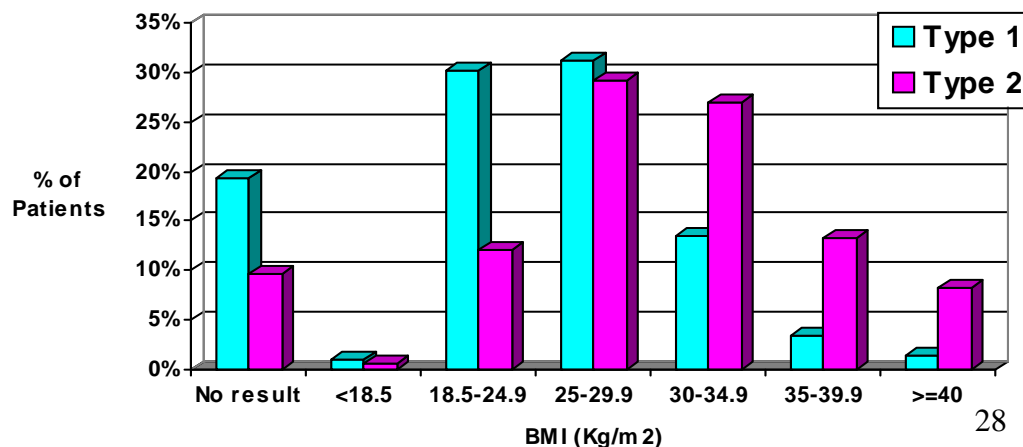
**Figure 11: Most recent Footrisk assessment recorded during the report period (01/01/2009 – 31/03/2010) shown as a percentage of type 1 and type 2 diabetes (n=18355).**



- 73.3% (n= 13462) of patients underwent Footrisk assessment during the report period
- Of those assessed during the report period, 18.5% (n=204) of type 1 patients and 18.5% (n=3390) of type 2 patients had a moderate or high footrisk score
- Of those assessed during the report period, 2.5% (n=28) of type 1 patients and 1.3% (n=157) of type 2 patients had Active Foot Disease

Diabetes can have an effect on the blood and nerve supply, which can lead to complications in the leg and foot. Not everyone will develop these problems, but ALL people with diabetes should have their foot risk assessed regularly. Maintaining good blood sugar and weight control is very important, as is avoiding smoking.

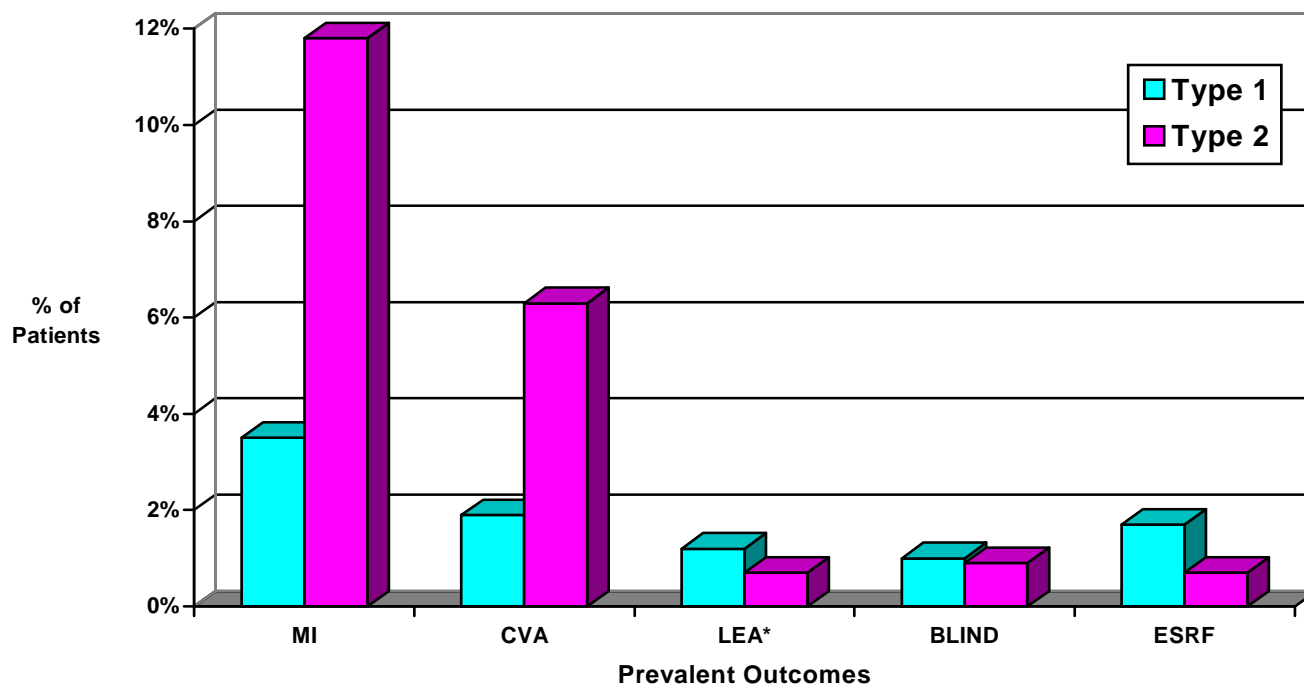
**Figure 12: Most recent Body Mass Index (BMI) values recorded during the report period (01/01/2009 – 31/03/2010) shown as percentage of diabetes type (n18355).**



- 89.4% (n= 16413) of patients had a BMI value recorded
- Of those with a BMI value recorded during the report period, 61.3% (n=887) of type 1 patients and 85.9% (n=12850) of type 2 patients had a BMI value of 25 kg/m<sup>2</sup> (overweight) or more
- Mean BMI value in type 1 patients was 26.9 kg/m<sup>2</sup> (Range = 12.2 kg/m<sup>2</sup> – 58.4kg/m<sup>2</sup>)
- Mean BMI value in type 2 patients was 31.2 kg/m<sup>2</sup> (Range = 13.9 kg/m<sup>2</sup> – 70.9 kg/m<sup>2</sup>)
- Mean BMI value (total tested population) was 30.8 kg/m<sup>2</sup> (Range = 12.2 kg/m<sup>2</sup> – 70.9 kg/m<sup>2</sup>)

## Prevalent outcomes

Figure 13: Prevalence of outcomes as a percentage of diabetes type on 31/03/2010



- 11.0% (n=2010) of the total population had a history of myocardial infarction (MI)
- 5.9% (n=1079) of the total population had a history of CVA
- 0.8% (n=140) of the total population had a history of lower limb amputation\*
- 0.9% (n= 171) of the total population were categorised blind
- 0.8% (n=141) of the total population had a history of end-stage renal failure

*Prevalent outcome figures are limited to patients who were alive, had Type 1 or Type 2 diabetes and were registered with a Tayside GP on 31/03/2010 (n=18355)*

- Excludes digits

**Myocardial Infarction (MI)** = commonly described as a heart attack

**Cerebrovascular Accident (CVA)** = commonly described as a stroke

**Lower Extremity Amputation (LEA)** = surgical removal of any part of the leg from the knee down but not including digits (toes)

**Blind** = is when visual acuity in both eyes is less than 3/60 (i.e. the patient can “count fingers”, see “hand movements”, “perceives light”, has “no perception of light”) or the patient is formally registered blind

**End Stage Renal Failure (ESRF)** – when the patient’s kidney function has deteriorated to the point that dialysis or transplant is required

## Comparison of Indicators Over Time

COMPARATOR	01/03/2005-31/05/2006 (15 months)	01/10/2005-31/12/2006 (15 months)	01/10/2006-31/12/2007 (15 months)	01/01/2008-31/03/2009 (15 months)	01/01/2009-31/03/2010 (15 months)
Diabetes prevalence	14900 patients (3.8%)	15207 patients (3.9%)	16150 patients (4.1%)	17404 patients (4.4%)	18355 patients (4.6%)
Diabetes incidence	1357 patients (0.36%)	1346 patients (0.36%)	1289 patients (0.34%)	1504 patients (0.39%)	1626 patients (0.43%)
HbA1c testing	14143 patients (94.9%)	14629 patients (96.2%)	15382 patients (95.2%)	16690 patients (95.9%)	17601 patients (95.9%)
Mean HbA1c	7.6% (Range = 4.1 – 20.9%)	7.5% (Range = 4.1 – 20.0%)	7.4% (Range = 3.7 – 18.3%)	7.4% (Range = 3.7 – 19.4%)	7.5% (Range = 3.9 – 19.3%)
Cholesterol testing	13326 patients (89.4%)	14276 patients (93.9%)	15128 patients (93.7%)	16283 patients (93.6%)	17156 patients (93.5%)
Mean Cholesterol	4.4 mmol/L (Range = 1.5 – 14.4)	4.4 mmol/L (Range = 1.4 – 15.1)	4.4 mmol/L (Range = 1.1 – 13.6)	4.3 mmol/L (Range = 1.4 – 17.6)	4.3 mmol/L (Range = 1.6 – 16.9)
Estimated GFR	Not in this report	Not in this report	14877 patients (92.1%)	16149 patients (92.8%)	17084 patients (93.1%)
Blood pressure testing	13380 patients (89.8%)	13792 patients (90.7%)	14680 patients (90.9%)	16729 patients (96.1%)	17556 patients (95.6%)
Mean blood pressure	138/75 mmHg	137/75 mmHg	137/75 mmHg	136/75 mmHg	135/75 mmHg
Eye screening	12880 patients (86.4%)	11879 patients (78.1%)	13175 patients (81.6%)	14880 patients (85.5%)	15874 patients (86.5%)
Foot risk screening	Not in this report	Not in this report	5820 patients (36.0%)	13049 patients (75.0%)	13462 patients (73.3%)
Body Mass Index screening	13039 patients (87.5%)	13385 patients (88.0%)	14133 patients (87.5%)	16122 patients (92.6%)	16413 patients (89.4%)
Mean Body Mass Index	30.3 kg/m <sup>2</sup> (Range = 15.1 – 69.0)	30.5 kg/m <sup>2</sup> (Range = 15.1 – 68.3)	30.7 kg/m <sup>2</sup> (Range = 13.4 – 66.7)	30.9 kg/m <sup>2</sup> (Range = 13.4 – 78.9)	30.8 kg/m <sup>2</sup> (Range = 12.2 – 70.9)
Mortality	4.1%	4.1%	4.1%	4.0%	3.8%

\*Prevalence populations are limited to patients with type 1 or type 2 diabetes who were alive and registered with a Tayside general practitioner last day of the report period. Denominators are via the GRO mid-year population estimates for Tayside for each year.

\*\*Incidence populations are limited to patients diagnosed with type 1 or type 2 diabetes during a 12 month period (as specified in each report)

\*\*\*Eye-screenings in this report includes fundoscopy and other non-specialised visual assessments performed in diabetes clinics and GP practices, etc. Subsequent reports are limited Digital Image photography or attendance at an Ophthalmology clinic in accordance with a change in national guidelines

# Network Contacts and Primary Work Base

## **Tayside Network Board Members:**

Dr Vicky Alexander, Consultant Paediatrician  
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Dr Geraldine Brennan, Consultant Physician  
Dr Julie Cavanagh, Consultant in Public Health  
Dr Alan Connacher, Co-Chair/Consultant Physician  
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Dr Alex Duncan, General Practitioner  
Mrs Angela Ellingford, Diabetic Retinopathy Screening Manager  
Dr John Ellis, Consultant Ophthalmologist  
Dr Alistair Emslie-Smith MCN Lead Clinician/General Practitioner  
Dr Stephen Greene, Consultant Paediatrician  
Mrs Rhona Guild, Primary Care Manager  
Ms Jackie Hodges, Practice Nurse  
Dr Graham Leese, Consultant Physician  
Mr David Lynch, General Manager  
Ms Vivian Mann, Patient Council  
Mr Andy McQueen, Patient Council  
Professor Andrew Morris, Professor of Diabetic Medicine  
Mrs Jeanette Seaman, Head of AHP Services  
Dr Iain Spence, Patient Council  
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Ms Angela Timoney, Director of Pharmacy  
Mrs Debbie Voigt, Diabetes Specialist Nurse  
Dr Drew Walker, Consultant in Public Health  
Miss Edith Walters, Head of Dietetics  
Ms Debbie Whitton, Practice Nurse  
Mrs Elaine Wilson, Clinical Network Manager  
Mrs Arlene Wood, Clinical Group Manager

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Ms Sandra Scott, Network Administrator  
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Dr Alex Duncan, Clinical Assistant, Arbroath Infirmary  
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Dr Ellen Malcolm, Staff Grade, Ninewells Hospital  
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Dr David McFarlane, Specialist Registrar, Ninewells Hospital  
Professor Andrew Morris, Professor of Diabetic Medicine, University of Dundee, Ninewells Hospital  
Dr Ewan Pearson, Consultant Physician and Clinical Lecturer, University of Dundee, Ninewells Hospital  
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Cathy Laidlaw, Perth Royal Infirmary  
Leslie McKenzie, Paediatrics, Ninewells Hospital  
Kirsten McLean, Ninewells Hospital  
Lesley Matheson, Ninewells Hospital  
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Gillian Wilkie, Ninewells Hospital

**Dietitians**

Lesley Grant, Ninewells Hospital  
Rhona Peters, Stracathro Hospital, Brechin  
Edith Walters, Perth Royal Infirmary  
Elinor Watson, Perth Royal Infirmary

**Podiatrists**

Kay Brown, Arbroath Infirmary  
Joanne Donaldson, Ninewells Hospital  
Judith Golden, Ninewells Hospital  
Vicky Green, Perth Royal Infirmary  
Brian McMurray, Ninewells Hospital  
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**Retinal Screening Service**

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Sheena Gallacher, Diabetic Retinopathy Screening Booking Clerk,  
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annual report can be accessed from the NHS Tayside

Diabetes MCN Website at:

[www.diabetes-healthnet.ac.uk](http://www.diabetes-healthnet.ac.uk)

If you would like further copies of the report or further information on any of the information contained in the report please contact Elaine Wilson at:

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