Celebrating Diabetes Education in Scotland

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Foreword

John A. McKnight

I am delighted to support ‘Celebrating Diabetes Education in Scotland’ as it sets out the requirements for both patient and professional education within Scotland in diabetes care and is excellent in showing how both concepts of patient and professional education are interwoven.

For people with diabetes, while endorsing national programmes of education, it also signposts the reader to many exemplars of good practice. Such exemplars are offered from a range of different Diabetes Managed Clinical Networks.

For professionals, it identifies competency frameworks for both the preparation and ongoing development of those working within diabetes. Competencies to meet the NICE requirements of a trained educator are clearly identified that will ensure all professionals know what is required of them.

The Diabetes Managed Clinical Network in each NHS Board in particular, will find it useful in helping to identify education that is needed to further improve the quality of diabetes care for both patients and members of the health care team.

I would encourage Diabetes Managed Clinical Networks to reflect on the information provided in Celebrating Diabetes Education in Scotland and to consider their own position in relation to both patient and professional education.

We have much to celebrate while acknowledging that there is yet much more to be done. This document will also assist the Scottish Diabetes Group to drive progress with the Scottish Diabetes Action Plan to further improve the quality of diabetes care in Scotland and help ensure that people with diabetes in Scotland receive safe and effective person-centered care.

John A. McKnight
Lead Clinician for Diabetes, Scotland
Chair Scottish Diabetes Group
Introduction

Professor S. MacRury

With the increasing global incidence of diabetes, particularly in the rate of diagnosis of type 2 diabetes, there is a pressing need for education provision for health care professionals to support day to day management of this increasingly complex condition. The evolving model of care in Scotland and indeed UK-wide is for a person with type 2 diabetes to be managed, at least initially, in primary care and the community and coupled with this is the need for individuals to embrace self-management.

The Diabetes Action Plan\(^1\) advocates that the delivery of all aspects of patient care are underpinned by high quality, appropriate professional education and training which is patient focused and states that all patients should have access to structured education programmes that are quality assured in line with NICE criteria within three months of diagnosis.

It is vital that all registered and non-registered health care workers who come into contact with a person living with diabetes have appropriate and current knowledge, skills and competency related to diabetes.

The Diabetes Education Advisory Group (DEAG), a sub group of the Scottish Diabetes Group, offers advice on professional education and areas for development and seeks to promote the provision and development of quality assured education and development opportunities for health care workers.

The group has developed a Scottish Diabetes Education Strategy to assist health care professionals to recognise the training and competencies that they need in order to provide support to people with diabetes. This needs to take place in context of the work undertaken by partner agencies that are providing education for people living with diabetes. Through structured education delivered by a suitably trained and informed workforce, people with diabetes can be enabled to acquire the knowledge and skills necessary to manage their diabetes and lifestyle choices.

The Diabetes Education Network Scotland (DENS) is a regional network of the UK DEN, established to support diabetes teams in integrating structured education for children and adults with diabetes into their service.

The education and information needs of health care professionals and those of people living with diabetes are different but are closely linked and should therefore be aligned.

To implement the specific indicators relating to education in the Diabetes Action Plan\(^1\) it was felt that the groups should be merged and that education be viewed as a continuum involving both people with diabetes and those who help with management.
Thus, both educational approaches could be brought together in an overarching national diabetes education strategy to embrace a shared philosophy underpinning education for professionals and education for people with diabetes.

In order to accomplish this, the appointment of a National Education Co-ordinator was recommended to work with the Diabetes Managed Clinical Networks in the implementation of the patient and professional diabetes education frameworks and the training and education strategy. The post has been supported by a steering group and buttressed by alliance with the Diabetes Patient Focus Group.

The National Education Co-ordinator post has been managed operational within NHS Education for Scotland (NES) and this has facilitated a number of important links to relevant departments and personnel during the process of developing the diabetes education strategy.

One of the main tasks has been the link with local Education Leads within Health Board MCNs in Scotland to advise on and inform current and potential professional education for local and national use; support collaborative working with partner agencies (including the voluntary sector) to meet information and education needs of people living with diabetes; support the establishment of processes to collate and disseminate information about education for health professionals and patients.
A further important aspect to the National Education Co-ordinator’s work in relation to patient education has been the refinement in definition of levels of education based on the original work of the short-life working group for type 1 diabetes and now extended to include type 2 diabetes. Levels encompass basic information from diagnosis, through ongoing education to more structured programmes but recognising that education has to be ongoing. Recording of offers and uptake of these different levels in SCI-Diabetes will allow monitoring through the Scottish Diabetes Survey, crucial to embedding education in everyday practice and ensuring universal access.

The project work has identified useful educational courses and resources in use throughout Scotland that are at present not formally matched to NICE criteria and to enable health care professionals to ensure these and any new material under development meets NICE criteria, an important process and toolkit have been developed. This represents a significant accomplishment and the resulting Assessment of Patient Education in Scotland & Tools for Assessment of Patient Education in Scotland (APEDS & TAPEDS) and Reviewers’ Handbook have been adopted by NES with documentation available online to all staff.

In parallel, the implementation of DENS competencies for trained educators and expansion of sources of diabetes competencies for specific professional groups are reported along with relevant learning opportunities.

An additional outcome of the project will be building an online resource that will signpost to patient related educational material and programmes as well as mapping health care professional competencies to patient educational levels and pertinent courses and material.

This report sets out the achievements of the National Education Co-ordinator and the project and highlights the significant advances in diabetes education for patients and health care staff involved in diabetes care. This will realise sustainable benefits for people with diabetes through provision of a pathway that can allow access to education for all. Now is the time to celebrate the opportunities for diabetes education; we need to embrace this resource and translate the substance within into quality of care for people with diabetes in Scotland.

Sandra MacRury
Chair
Scottish Diabetes Education Advisory Group
This document identifies educational frameworks for both people with diabetes mellitus (diabetes) and professionals working within the field of diabetes.

If you are someone who has diabetes, the educational framework developed highlights the type of education that should be available for you from when you are diagnosed with diabetes until the present time.

If you are a professional who is working within the field of diabetes, the educational framework will direct you to competency frameworks, programmes or resources that are not only essential for practice but also recommended to enhance your professional practice.

Education is promoted that allows either group of people to revisit a subject matter at different levels as individual’s life experiences change and alter, that is, using a spiral curriculum. People learn core knowledge and skills in relation to one aspect of care that is further developed according to need at a later time. Attitudes towards diabetes evolve over time and are affected and influenced by people, events and self reflection.
Celebrating Diabetes Education in Scotland builds on previous policy documents. The Scottish Diabetes Action Plan enhances previous work and demonstrates a commitment to improve quality of care for people with diabetes. Innovation, research, involvement of people with diabetes and the sharing of information and best practice all combine to improve standards of care.

One recommendation in the Scottish Diabetes Action Plan was the establishment of a National Education Co-ordinator for diabetes. The role of the person appointed was to work with Education Leads within each Diabetes Managed Clinical Network (MCN) in every Health Board.

The Scottish Diabetes Education Advisory Group’s Education Strategy aims to set out opportunities for appropriate and relevant professional diabetes training, education and development to meet the needs of people with diabetes.
Educating and empowering people with diabetes in Scotland underpins most recommendations of diabetes management in the Scottish Intercollegiate Guidelines Network 116 (SIGN 116). Building on previous work12-13, 15 SIGN 116 recommended that structured patient education programmes should adhere to the principles identified in these documents.

SIGN 116 recommended that children and adolescents should have access to programmes of structured education which have a basis in enhancing problem solving skills.

SIGN 116 recommended that adults with type 1 diabetes experiencing problems with hypoglycaemia or who fail to achieve glycaemic targets should have access to structured education programmes based upon adult learning theories. Adults with type 2 diabetes should also have access to structured education programmes based upon adult learning theories.

The SIGN 116 recommendations for people with type 1 diabetes are based predominantly on examining the evidence from the DAFNE (Dose Adjustment for Normal Eating www.dafne.uk.com) programme, the BITES (Brief Educational Intervention in Type 1 Diabetes http://diabetesyork.com/Courses/BITES) programme, and BERTIE (Bournemouth Type 1 Intensive Education programme http://213.106.147.101/bdec2/bertie.shtml).

Recommendations for people with type 2 diabetes are based on evidence in relation to various research based studies including the X-PERT (Diabetes http://www.xperhealth.org.uk/about-us.html) and the DESMOND (Diabetes Education and Self-Management for Ongoing and Newly Diagnosed http://www.desmond-project.org.uk/) programmes.
Ensuring quality education in Scotland

The NHS in Scotland aims to develop a culture of mutuality whereby patients and carers are genuine partners in the delivery of their care through a commitment to patients’ rights and active involvement in self management that suits their lifestyles. Education of patients and carers is central to self management. A special Health Board, NHS Education for Scotland (NES) is responsible for supporting NHS services to the people of Scotland through the development and delivery of education and training for all NHS Scotland staff.

Health care professionals are encouraged to adopt generic guiding principles for the preparation of individuals who support learning within the workplace (http://tinyurl.com/d583pmh).

Such principles for learning are easily transferred to the education of people with diabetes, regardless of the individual’s ability to read, write or participate in peer learning through groups. Using a principles approach ensures that education can be adapted to meet the needs of many people.

Several Diabetes MCNs have adopted SIGN recommendations and subscribe to the national programmes of DAFNE, DESMOND, and X-PERT (Diabetes). Health Boards assume the responsibility for the minimal ongoing recurring costs associated with these programmes while staff benefit from the central organisation of peer review, quality assurance, continuing professional development and updating of curriculum and resources.

The above programmes are helpful for some areas but are not suitable for everyone. Adopting a person-centred approach to education means that there needs to be flexibility in both content and presentation as one size does not fit all.

Scotland has a diverse population from many minority ethnic groups with specific cultural issues as well as particular needs for those living in remote and rural areas. Education therefore needs to be culturally sensitive and specific to the context. Several Diabetes MCNs have therefore developed their own educational programmes in recognition that a range of flexible educational options is needed to meet specific, local, educational needs.

To ensure that all education programmes meet the NICE Criteria, a process has been developed to review educational programmes.
Using a structure-process-outcome framework\(^1\), the documents: Assessment of Patient Education in Scotland & Tools for Assessment of Patient Education in Scotland\(^3\) (APEDS & TAPEDS) along with the Reviewers’ Handbook\(^4\) were developed.

The structure in the development of the APEDS & TAPEDS\(^3\) and Reviewers’ Handbook\(^4\) used a consensus approach with the Education Leads in each Diabetes MCN, patient representatives and interested others.

Each Diabetes MCN has been invited to nominate professionals and people with diabetes to be trained as reviewers of education programmes. The criteria for reviewers are in the Reviewers’ Handbook\(^4\).

The process whereby patient education is reviewed to meet the criteria for structured patient education is identified in the Reviewers’ Handbook\(^4\) that has to be read in conjunction with the APEDS & TAPEDS document\(^3\).

The Scottish Diabetes Education Advisory Group (http://tinyurl.com/cealafb) administer the process and all applications of programmes to be reviewed should be submitted to the Chair of the group.

A key outcome is that the offer of, and attendance at, structured patient education would be recorded on SCI-Diabetes and reported in the annual diabetes survey.

Definitions for SCI-Diabetes according to type of diabetes and educational level have been developed\(^4\). Statistics on attendance at structured education will be reported in future Scottish Diabetes Surveys.
The diagnosis of diabetes, a long term condition, is like starting on a journey. Throughout this journey, health professionals support and enable people with diabetes to self manage their illness within their own individual family, employment, social, religious and cultural contexts.

During this journey, the role of the person with diabetes and of health care professionals will change.

Education to support people with diabetes, their families and carers is central to self management and addressing individuals’ learning needs facilitates learning.

One of the Government’s three quality ambitions is for services to be more ‘person centred’ defined as:

‘mutually beneficial partnerships between patients, their families and those delivering healthcare services which respect individual needs and values and which demonstrate compassion, continuity, clear communication and shared decision making’ (page 10).

Education to support people with diabetes is central to care and meets the person centred quality ambition.

The format of education

Every clinical consultation or clinical conversation is an educational opportunity. Hence education can be undertaken in many forms: opportunistically; on an ad hoc basis; routinely or in a more structured format.

Patient education follows a spiral curriculum in which basic ideas are revisited several times, building up the fuller picture, until the person understands its totality which may take a lifetime of learning to achieve.
Topics addressed at diagnosis of the condition will be revisited to build on the person’s knowledge and experience over the years. The constant revisiting of education, at different depths of knowledge and experience, assists in developing confidence in the learner for self maintenance and self management.

The manner in which education is undertaken may include some of the following: mentorship; role modeling; coaching; supervision; group work, lectures, tutorials, purposive conversations. Education may also be delivered, for example, on a one-to-one basis; one to two, including family or friends; one person to a small group; two or more professionals to a small group of people with diabetes. It may be delivered by telephone; through internet programmes; on-line learning; in an educational setting; self directed learning. These are just some examples of different types and formats of education that are currently being undertaken as part of diabetes care throughout Scotland.

Education of people should include two main elements: self maintenance and self management\(^{20}\). Education for self maintenance normally relates to goal setting, concordance to treatments and self monitoring of diabetes with a view to prevent complications arising.

Education for self management includes more sophisticated life-skills in:
- recognising something is different e.g. the person experiencing early symptoms of hypoglycaemia;
- making decisions based on the self-diagnosis e.g. taking glucose;
- thereafter managing the after effects e.g. analyzing the cause of the hypoglycaemia and making any necessary adjustments\(^{21}\).

Both self maintenance and self management aim to assist individuals to live life to the full.

SIGN 116\(^{7}\) states:
‘Structured education programmes should adhere to the principles laid out by the Patient Education Working Group.’ (Page 9) and access to such education is recommended. In considering structured patient education, there is a need for common understanding of terminology to assist with sharing information.

Education to support people with diabetes
Celebrating Diabetes Education in Scotland
www.nes.scot.nhs.uk

See Terminology paper: Reviewers’ Handbook

Any educational programme will have a Programme Aim that is normally one sentence indicating the overall purpose of the Programme. Thereafter, the Programme normally has about 4-6 learning outcomes. These learning outcomes are high level and will be achieved by attendance at the individual sessions within the Programme. The number of individual sessions will vary according to each Programme.
Each individual session will have an aim and normally about 3-4 learning outcomes.

The individual sessions will also have indicative content that is the list of actual topics or aspects to be covered within each session which normally includes addressing individual’s needs.

The creative part is the methodology used to address the aim, learning outcomes and indicative content. The methodology may be through a lecture, case study, reflection, simulation, role play and so on. There is a wide scope for creative educational solutions to address learning outcomes.

Education may be evaluated in a variety of ways. Questionnaires are often used to test recall of knowledge. The ‘teach back’ technique is an effective method to improve people’s understanding and outcomes (http://tinyurl.com/cb8qxzo).

Situations where learning may not become obvious until after some considerable time are hard to evaluate in the short term and so, often, observation can be used.
Education according to age, type of diabetes and culture

This section will address patient education according to stage of life, type of diabetes and minority ethnic aspects. Only type 1 diabetes and type 2 diabetes will be addressed.

National resources are available to support education at:

- **http://www.mydiabetesmyway.scot.nhs.uk/**
  This is the NHS Scotland interactive diabetes website to help support people who have diabetes, their family and friends. There are leaflets, videos, educational tools and games containing information about diabetes. The website can also be used by people with diabetes to view their own up-to-date diabetes clinic results, to help them manage their condition more effectively.

- **http://www.diabetes.org.uk/**
  This is the website of the UK's leading diabetes charity. Diabetes UK are experts in the field of diabetes care, treatment and research and use this expertise to compile the evidence base for policies that help all of those affected by diabetes and to inform their campaigns for better services. The website hosts many resources for people with diabetes and professionals working in diabetes.
Nutrition and Diet Resources (NDR-UK) publish resources to support health and social care professionals in preventing, treating and managing disease through diet. The organisation is an accredited provider of quality information (Department of Health Information Standard) offering a comprehensive portfolio of diet and nutrition resources that are evidence-based, reviewed and patient-focused. NDR-UK provide dietary information on the management and treatment of diabetes for all age groups and the South Asian population.

NDR-UK provide several resources in relation to diet and diabetes (http://tinyurl.com/cqkncwx). In particular, the Carbohydrate Counting resources developed for children and young people are available to download as follows:

- An introduction to carbohydrate counting [http://tinyurl.com/crabab2q]
- Carbohydrate counting workbook [http://tinyurl.com/c8c5rja]
- Carbohydrate tables [http://tinyurl.com/bpfdjfr]
- Carbohydrate and blood glucose diary [http://tinyurl.com/cf5wcop]

Three levels of education have been identified: Level 1 refers to education delivered at diagnosis of diabetes; level 2 is ongoing education; level 3 is education that is delivered to a group of people with diabetes. National programmes of DAFNE, DESMOND and X-PERT (Diabetes) are all considered to be level 3.
Signposted below are examples of education provided that meet educational needs according to the type of diabetes and the level of provision. Examples are Diabetes MCN specific but contact details are given of key individuals to assist with dissemination of good practice.

**Children and young people with diabetes**

At the time of writing, a scoping exercise is being conducted by the National Diabetes Paediatric Co-ordinator including the education of children and young people with diabetes.

The following website summarises the services and education for young people in Scotland: [http://www.diabetes-scotland.org/](http://www.diabetes-scotland.org/)

Diabetes UK produced a Children’s Charter in 2009 that states:

*Every child and young person with diabetes, their parents and carers should have access to high-quality education, information, emotional and psychological support, to aid self-management of the condition.*

Contributors to the Children’s Charter believe that education is central to high quality care and to help achieve good physical and emotional wellbeing.

**Children and young people with type 1 diabetes: level 1**

Education at this level is for young people who have just been diagnosed with type 1 diabetes and their parents or carers. Normally education is undertaken on a one to one basis for the first few weeks.

The initial principle is that young people newly diagnosed with type 1 diabetes would be safe and where possible, able to practice and identify self maintenance. Education usually involves utilising adult learning theory for the parents and carers and child learning theory for the children.
**Children and young people with type 1 diabetes: level 2**
The nature of clinic attendance for children and young people with type 1 diabetes ensures regular, frequent contact with the health care team. Level 2 education is, to date, normally conducted on a one-to-one basis according to each individual’s needs.

**Children and young people with type 1 diabetes: level 3**
There are challenges for group education for children and young people for a variety of reasons including the difficulties in providing this for different age ranges as well as the implications of removing young people from school for diabetes education attendance.

Five Scottish centres have participated as pilot or control centres for the Kids in Control of Food (KICK-OFF) randomized control trial aimed for young people between the ages of 11 and 14 years of age. Further information can be found on the website: [http://www.kick-off.org.uk/team.php](http://www.kick-off.org.uk/team.php).

The Scottish Government has stated that 25% of young people with type 1 diabetes should be using a continuous infusion of insulin device (pump, [http://tinyurl.com/cbjlh5e](http://tinyurl.com/cbjlh5e)) by March 2013. There is therefore an increase in the number of young people who will require specific pump education and several Diabetes MCNs are considering group education. Forth Valley Diabetes MCN, for example, has initiated group education in pump therapies. Further information can be obtained from Kathryn Fraser, Diabetes Specialist Dietitian, Kathryn.fraser@nhs.net.
Adults with type 1 diabetes

This section outlines the educational framework for adults with type 1 diabetes according to levels of education (page 15).

**Adults with type 1 diabetes: level 1**

At diagnosis of diabetes, education is normally undertaken on a one to one basis for the first few weeks. The initial principle is that people newly diagnosed with type 1 diabetes would be safe and able to practice and identify self maintenance. The curriculum content normally addresses those aspects that are essential for the safety of the person with diabetes incrementally increasing the content over days and weeks to include other aspects of care.

Some Diabetes MCNs have developed an educational care pathway for people with type 1 diabetes. An example from Forth Valley is given here:

- **See FV carepathway**

and further information can be obtained from Kathryn Fraser, Diabetes Specialist Dietitian, Kathryn.fraser@nhs.net.

A dietetic example from Greater Glasgow and Clyde Diabetes MCN is given at the following link:

- **GGC T1 diet education pathway**

Further information can be obtained from Carsten Mandt, Diabetes MCN Co-ordinator, carsten.mandt@ggc.scot.nhs.uk.

Coupled with this, the Western Isles Diabetes MCN has developed an educational programme for people newly diagnosed with type 1 diabetes that includes: programme philosophy; aims; learning outcomes and indicative content.

- **See WIDE 1**

**Adults with type 1 diabetes: level 2**

The NICE\textsuperscript{15} recommendation states that:

“structured patient education is made available to all people with diabetes at the time of initial diagnosis and then as required on an ongoing basis, based on a formal, regular assessment of need” (Page 4)

As education is to be delivered ‘as required’ and on an ‘ongoing basis’ this relates to level 2 education. The need for level 2 education will be identified by people with type 1 diabetes requesting specific education as opposed to them attending a formal course. Hence this demonstrates self management.

Such education is currently being delivered across Scotland but more on a one-to-one basis as individuals approach their health care professionals for specific education e.g. how to manage insulin injections when flying through different time zones.

A small group across Scotland are working on developing a national programme for ongoing education that should ensure consistency of information with appropriate educational resources to support this.
**Adults with type 1 diabetes: level 3**

Education at this level is characterised by group education of people with type 1 diabetes with a prescribed curriculum around specific aspects of self management that will support the person making life style changes to live with diabetes. The focus of the education is on learning with, and from, each other with the healthcare professional acting as a source of knowledge and aiming to facilitate learning.

The programme may be a nationally recognised curriculum, developed through research. SIGN 116 endorse the DAFNE Programme and BERTIE along with others specifically developed for people who are experiencing problems with hypoglycaemia.

The topic of the group education may address both self management and self maintenance. Topics that are addressed currently through group education include for example: carbohydrate counting; foot care; multiple daily injections; weight management. Any group education course that meets the recognised national criteria may be considered to be a level 3 course. Hence, people may undertake several level 3 courses according to their own clinical need.

Forth Valley Diabetes MCN provide NewDEAL that is group education for people with type 1 diabetes who manage their condition with multiple daily injections. Further information can be obtained from Kathryn Fraser, Diabetes Specialist Dietitian, Kathryn.fraser@nhs.net.

Tayside Diabetes MCN have developed and implemented the Tayside Insulin Management Programme (TIM) for people with type 1 diabetes to: support self management; increase awareness of influencing factors that affect diabetes control; increase understanding of the consequences of poorly controlled diabetes. Further information can be obtained from Susan Chisholm, Diabetes Specialist Nurse, susan.chisholm3@nhs.net.

Lothian Diabetes MCN has developed the RECLAIM course for people with Type 1 and Type 2 diabetes using a basal bolus regimen who need to learn carbohydrate counting and insulin management. Further information can be obtained from Alyson Hutchison, Diabetes Dietitian, alyson.hutchison@luht.scot.nhs.uk.

Fife Diabetes MCN has developed the ‘Diabetes Footsteps’ that is a discussion tool for foot care that can be used with people with diabetes as well as to train others to deliver foot care education. Further information can be obtained from Angela Green, Principal Podiatrist, angelagreen1@nhs.net.
Adults with type 2 diabetes

This section outlines the educational framework for adults with type 2 diabetes according to levels of education (page 15).

Adults with type 2 diabetes: level 1

Education at this level is for people who have just been diagnosed with type 2 diabetes. Normally education is undertaken on a one to one basis for the first few weeks and will predominantly focus on making lifestyle changes around diet, exercise and, if necessary, smoking cessation. The principle here is that people newly diagnosed with type 2 diabetes would quickly learn the core skills for self management and be able to practice and identify self maintenance.

The Western Isles Diabetes MCN has developed an educational programme for people newly diagnosed with type 2 diabetes that includes: programme philosophy; aims; learning outcomes and indicative content.

See WIDE 2

Ayrshire and Arran Diabetes MCN are using Conversation Maps™ with people newly diagnosed with type 2 diabetes. Further information can be obtained from Carolyn Oxenham, MCN Education Facilitator, Carolyn.oxenham@aapct.scot.nhs.uk.

Adults with type 2 diabetes: level 2

The NICE15 recommendation states that: “structured patient education is made available to all people with diabetes at the time of initial diagnosis and then as required on an ongoing basis, based on a formal, regular assessment of need” (Page 4)

As education is to be delivered ‘as required’ and on an ‘ongoing basis’ this relates to level 2 education. The need for level 2 education will be identified by people with type 2 diabetes requesting specific education as opposed to them attending a formal course. Hence this demonstrates self management.

Such education is currently being delivered across Scotland but more on a one-to-one basis as individuals approach their health care professionals for specific education e.g. how to manage oral hypoglycaemic agents prior to surgery.

A small group across Scotland are working on developing a national programme for ongoing education that should ensure consistency of information with appropriate educational resources to support this.
**Adults with type 2 diabetes: level 3**

Education at this level is characterised by group education of people with type 2 diabetes with a prescribed curriculum around specific aspects of self management that will support the person making lifestyle changes to live with diabetes. The focus of the education is on learning with, and from, each other with the healthcare professional aiming to facilitate learning.

The programme may be a nationally recognised curriculum, developed through research. SIGN 116 endorse the DESMOND Programme and X-PERT (Diabetes).

The topic of the group education may address both self management and self maintenance. Topics that are addressed currently through group education include for example: carbohydrate counting; foot care; weight management. Any group education course that meets the recognised national criteria may be considered to be a level 3 course. Hence, people may undertake several level 3 courses according to their own clinical need.

Ayrshire and Arran Diabetes MCN are addressing the educational needs for both people with type 1 and type 2 diabetes under the auspices of the ‘Moving on Together: Self Management Programme for people with Long Term Conditions’.

This programme is for any person living with a long term condition and so addresses general aspects of such. It includes disease specific elements. Further information can be obtained from the Health Foundation website: [http://tinyurl.com/bo5gff7](http://tinyurl.com/bo5gff7)

Lothian Diabetes MCN has developed the RECLAIM course for people with Type 1 and Type 2 diabetes using a basal bolus regimen who need to learn carbohydrate counting and insulin management. Further information can be obtained from Alyson Hutchison, Diabetes Dietitian, [alyson.hutchison@luht.scot.nhs.uk](mailto:alyson.hutchison@luht.scot.nhs.uk).

Fife Diabetes MCN has developed the ‘Diabetes Footsteps’ that is a discussion tool for foot care that can be used with people with diabetes as well as to train others to deliver foot care education. Further information can be obtained from Angela Green, Principal Podiatrist, [angelagreen1@nhs.net](mailto:angelagreen1@nhs.net).
Summary

There are a variety of educational programmes currently available throughout Scotland addressing the needs of people with type 1 diabetes and type 2 diabetes in varying ways. There is some duplication in educational provision across the Health Boards and there are some gaps. If current educational provision was shared nationally, this would free up some resources to deliver education for people with diabetes and also allow more strategic direction in developing further education.

Minority ethnic group

There are specific educational needs related to people from minority ethnic groups that include literacy, language and accessibility issues.

The recent best practise report identifies these and this can be found at:
http://tinyurl.com/bq7vkx8
Professional Education

Introduction

People with diabetes are cared for within a variety of settings as they are supported within primary, secondary and tertiary care environments. All health care professionals therefore need a certain level of knowledge on diabetes and its management to provide appropriate care. All health care professionals require to be informed about diabetes; others who have more direct contact with people with diabetes need more skilled practice; and yet others who are leading and developing diabetes initiatives require enhanced or expert diabetes knowledge and skills.

Health care professionals work in partnership with people with diabetes to assist them in their self management. The role of the health care professional will vary according to the needs of the person with diabetes and the stage which they are at in their health care journey.

See patient/professional journey

Health care professionals have to address their own educational needs in preparation for caring for people with diabetes. All healthcare professionals have their own professional codes of conduct to which they are required to adhere:

- [http://www.gmc-uk.org](http://www.gmc-uk.org)
- [http://www.nmc-uk.org](http://www.nmc-uk.org)
- [http://www.hpc-uk.org](http://www.hpc-uk.org/)
Lifelong Learning and Continuing Professional Development are requirements of all professional bodies and health care professionals need to take responsibility for demonstrating their own learning and its impact on practice.

Coupled with this, many health care professionals, working within the National Health Service, utilise the Knowledge and Skills Framework (KSF) with their line managers for annual performance and development review and identification of learning needs.

The preparation of professionals to support people with diabetes is embedded within this context of regulatory requirement and professional self direction.

**Diabetes education**

The preparation of health care professionals to educate and support people in self management is crucial. To achieve this, health care professionals require a certain skill set and knowledge base that has several pertinent key elements:

- knowledge of diabetes
- clinical experience of caring for people with diabetes
- knowledge of how to teach
- other appropriate skills

**Knowledge of and experience in diabetes care**

Knowledge of, and experience in, diabetes care are both requirements prior to participating in specific education of people with diabetes.

Higher Education Institutions, both Universities and Colleges, provide a variety of courses in diabetes care and management. As the provision of such courses is normally dependent on market forces, their availability is variable. The Diabetes in Scotland website provides some information [http://tinyurl.com/ccysfts](http://tinyurl.com/ccysfts).

Some Diabetes MCNs provide continuing professional development courses in diabetes for health care professionals and such local provision can normally be accessed easily. Access to each MCN is through the Health Board websites: [http://tinyurl.com/63hbuo](http://tinyurl.com/63hbuo). The voluntary sector have a wealth of information on diabetes and many provide educational opportunities.

The Knowledge Network provides a comprehensive access to a wealth of resources on all aspects of health and social care. It promotes the sharing of best practice and resources and there are diabetes communities and a shared space for staff to access and populate: [http://tinyurl.com/c4rh4l8](http://tinyurl.com/c4rh4l8).

**Formal learning**

Formal learning relates to courses that may offer a credited award or else are provided for continuing professional development. These may be delivered through face-to-face learning, on-line learning or through blended learning.
The aims and learning outcomes of such courses may be diabetes specific or related to other necessary skills required for teaching others.

The International Diabetes Federation has developed an all encompassing curriculum for professionals. The content of this can be accessed at: http://tinyurl.com/bnnwrfq

The Scottish Diabetes Group supported the development and implementation of a short course in Peer Review training delivered by the University of Dundee. Further information can be obtained from the University of Dundee's Professional Development Academy: http://primarycarecpd.wordpress.com.

Experiential learning

Within the context of diabetes care, all health care professionals undergo experiential learning while caring for people with diabetes. Such learning can be enhanced where there is clinical supervision and mentorship.

NES has produced Generic Guiding Principles for those supporting learning in the workplace. The document can be found at: http://tinyurl.com/cmzkq9z or via the NES website for supporting learning in practice http://tinyurl.com/bo5u72e.

Reflective learning

Learning can occur both ‘in practice’ when the healthcare professional is engaged in diabetes care and ‘on practice’ when the professional is reflecting on a particular situation. One tool to assist with reflection both in and on practice can be found on the Effective Practitioner website that is recommended for all nursing, midwifery and allied health professional staff: http://tinyurl.com/d46gnvw.

NES provide a ‘Train the Trainers’ Toolkit’ which is a practical guide in the form of an education programme that can be delivered within any Health Board in Scotland by appropriately qualified educators e.g. Staff with a teaching qualification or Practice Educator Facilitators. This programme is flexible in its design and delivery to meet the needs of teams or groups of staff who are involved in facilitating or providing any form of education. The website is: http://www.nes.scot.nhs.uk/education-and-training/by-theme-initiative/facilitation-of-learning.aspx. Health care professionals who do not have a recognised teaching qualification or who have not completed some formal learning about how to teach others are encouraged to attend this programme to meet the requirements of a ‘trained educator’

On-line learning

There are a variety of national educational resources available electronically to assist professionals. The list below is not definitive as it is continually changing and being further developed.

NES provides a variety of resources and three are identified here for dissemination.

For NHS staff the NES Diabetes Management for Pharmacists module on LearnPro provides base-line knowledge for any professional enhancing their core knowledge on diabetes. While some of the pharmaceutical properties of medication may be too in-depth for non-pharmacists, it does give a good overview of diabetes care.
NES has developed some tools, information and resources around good communication skills that are appropriate for all consultations within a person centred care environment. The resource can be accessed at: http://tinyurl.com/d6fvto7.

NES has also developed resources around self management that are appropriate for diabetes care. These resources can be accessed at: http://tinyurl.com/bubxwjm

The Scottish Government Health Directorate in conjunction with the Scottish Diabetes Group has purchased access to the e-learning module “Safe Use of Insulin” which was developed by NHS Diabetes. This module is appropriate for all staff with a role in insulin administration and prescribing. The module that can be accessed at: http://nhsdiabetes.healthcareea.co.uk/scotland. Other modules are being added to this website regularly for professionals working in Scotland.

An on-line resource has been developed for all Health Care Professionals to assist them in foot risk awareness and management available at: http://www.diabetesframe.org/.

Children and young people

The Children and Young People’s Services Managed Knowledge Network is a portal to information regarding education for children and young people’s services in Scotland. It addresses various aspects of care for children with a long term condition and while it does not yet have anything specific for diabetes, it does have information about self management and education:

www.knowledge.scot.nhs.uk/child-services

A resource for multidisciplinary staff working within Specialist Children’s services addresses psychosocial interventions for improving adherence, self-management and adjustment, to physical health conditions that is applicable to young people with diabetes: http://tinyurl.com/bnf4qlv

**Working in partnership & supporting self-management programme**

This e-learning programme supports trained educators to meet many of the additional skills identified. The course aims to facilitate partnership working between clinicians and patients. It includes a review of clinician communication and consultation skills and motivational interviewing techniques that promote self management through the use of the three enablers: agenda setting; goal setting; and follow up. The program also supports GP revalidation/appraisal and Nurse/AHP personal development plan/KSF.

Further information can be obtained from Carolyn Oxenham, MCN Education Facilitator, Carolyn.oxenham@aapct.scot.nhs.uk.
Culturally specific learning
To meet the learning needs of people with diabetes, all education must be culturally appropriate. Many Health Boards offer specific training in cultural awareness.

National resources of teaching sessions, support notes and work sheets have been developed in English, Chinese and Urdu for education sessions with these people groups.  
http://diabetesinscotland.org.uk/MEG/home.php

The Knowledge Network hosts language specific resources provided by the voluntary sector to support staff educating people about their diabetes http://tinyurl.com/bq4stl6.

Competencies in diabetes and education
Knowledge needs to be translated into action and hence there has been a drive for developing competency based frameworks for various professional groups. These competencies can be used to write job descriptions, for professionals’ personal development plans and in their KSF. Skills for Health27 have identified a whole range of competencies for different professional groups. Such competencies have normally been integrated into the professional competencies identified below.

Educational competencies
Educational competencies have been developed and identified9. The Diabetes Education Network has also derived educational and research competencies from various documents that are currently being piloted http://diabetes-education.net/ (2012).
Diabetes competencies for professional groups

Most professional groupings are utilising competency frameworks as part of staff KSF development plans. To date there are competency frameworks for the following professional groups that are presented in alphabetical order.

**Community Nurses**
Lothian Community Nurses and Diabetes Specialist Nurses (DSN) have worked from the many competency documents currently available to derive Diabetes Competencies for Community Nurses.

![See Lothian Community Nurses Competency in Diabetes](http://tinyurl.com/bn93bw4)

These competencies have been piloted within Lothian and are now endorsed and being assimilated into each District Nurses’ KSF job descriptions. It must be noted that Lothian Health Board currently (2012) do not have any community based DSNs but work with a system of Community Link Nurses who share information with their colleagues locally. Further information can be obtained from Jill Little, DSN, jill.little@luht.scot.nhs.uk.

**Dietetics and other frontline staff**
An Integrated Career and Competency Framework for Dietitians and Frontline Staff has been developed and is being utilised nationally in the appointment of staff and in their professional development.

Competencies are matched according to level of competence and to the KSF that assists with professional development.

**General Practitioners**
General Practice training is governed by the Royal College of General Practitioners curriculum ([http://tinyurl.com/bn93bw4](http://tinyurl.com/bn93bw4)). The curriculum and associated competencies, address the management of people with chronic diseases, including diabetes, its impact on the patient and the preparation of the General Practitioner to teach others. Many General Practitioners who take a responsibility within their Practice for diabetes management may also undertake a variety of postgraduate courses in diabetes.

**Hospital based Medical Staff**
After graduation, Doctors are required to complete Foundation Years 1 and 2 (FY1 and 2) before entering medical specialty programmes. FY1 and 2 constitutes a programme of work based learning as well as on-line learning supported by Foundation Tutors. There are five diabetes management modules available to FY 1 and 2 Doctors on their e-portolio.

Doctors wishing to train in endocrinology and diabetes must undertake core specialty training prior to higher specialty training where they follow an approved specialty curriculum and associated assessment system.
Nurses (including Practice Nurses and Treatment Room Nurses)

An integrated career and competency framework for diabetes nursing has been developed as a result of collaboration between several professional bodies, representing nurses working in diabetes care: http://www.trend-uk.org/. The educational preparation of Practice Nurses, who are playing a significantly increasing role in the care of people with diabetes, is also identified.

There are five levels of competency identified:

1. unregistered practitioner (for Health Care Assistants);
2. competent nurse;
3. experienced or proficient nurse;
4. senior practitioner or expert nurse;
5. consultant nurse.

This document is regularly updated to reflect current practice and competencies are presented by clinical area or topic and according to level of competence identified above.

Orthotists

Orthotists have developed a competency framework for the prevention, treatment and management of diabetic foot disease. National Occupational Standards have been mapped to the competency framework and the KSF level and dimensions. Competencies have been developed for Level 2 Support Workers through to Level 8 Consultant Practitioners on the Career Framework.

Paediatric Nurses

The Paediatric and Adolescent Diabetes Group of the Royal College of Nursing have developed a role framework and service guidance for nursing staff working with children and young people with diabetes: http://tinyurl.com/ykwsr5n.

Podiatry

Competencies in Podiatry have been developed nationally. Within Scotland there has been considerable work undertaken within Podiatry to provide standards of care applicable across all Health Boards in Scotland. More information can be found at:

http://tinyurl.com/bwwrojc
Pharmacy
Community Pharmacists are increasing their role in the care of people with diabetes from screening for diabetes to referring people to the appropriate professional. While Pharmacists do not currently work within a competency framework, a Scottish research study identified various pertinent competencies for practice30.

Psychology
Clinical psychologists complete a three year Doctorate in Clinical Psychology, involving both clinical placements and academic study that is competency based. Health psychologists complete equivalent doctoral level training. Clinical and health psychologists have competence in working across a wide range of physical health problems including diabetes.

Other related competency frameworks
Competencies have been developed to deliver interventions to change lifestyle behaviours that affect health31. Such competencies are relevant in the care of people with diabetes.

Summary
All health care professionals responsible for patient education are required to be professionally competent in diabetes care and to teach and facilitate learning. The preparation of professionals to teach and support others in self managing their diabetes is part of each professionals continuing professional development and life long learning.

Acknowledgements
This document was developed in consultation with people with diabetes and health care professionals from the Steering Group for the National Education Co-ordinator and members of the Scottish Diabetes Education Advisory Group.
References


   http://tinyurl.com/d724apu

   http://tinyurl.com/cs54aam

   http://tinyurl.com/blnrb3r


The role and responsibilities of the MCN Diabetes Education Coordinator

Context

The Scottish Diabetes Action Plan (2010) states that

‘Each diabetes MCN will identify an individual who will have responsibility and the skills for ensuring delivery of local patient education programmes.’

Health Boards have therefore appointed someone as an Educational Lead who will work with the National Education Coordinator to take forward elements of the Scottish Diabetes Action Plan around patient education.

Parameters

The Educational Lead in each MCN will have a diabetes focus and may have a clinical element to their role.

Responsibilities

1. To be the first point of contact relating to both patient and professional education within each MCN.

2. To be a local resource for colleagues, promoting both patient and professional educational opportunities and initiatives in diabetes care.

3. To support colleagues in development of educational resources both locally and nationally through collaborative working with others in this role, the National Education Coordinator, local learning and training centers and NHS Education for Scotland.

4. To work with colleagues to ensure that courses provided within each MCN meet NICE criteria.

5. To work with the National Education Coordinator in relation to patient and professional education.
Diabetes Education Strategy for Scotland

1. Introduction

Training and education of healthcare staff is essential to ensure people with diabetes receive high quality care. Educational needs will vary across the workforce; however it is essential to ensure that patients receive an equitable service no matter where they live. It is important to focus on capabilities rather than professions.

2. Policy context

The Scottish Diabetes Action Plan (2010) recognises education and training for professionals as being one of the core building blocks for effective diabetes care, and this training and education strategy for health care professional staff forms part of an overarching diabetes education framework for Scotland. One of the essential criteria for providing high quality care and education for people with diabetes is that members of the diabetes team have access to a training programme. Training courses should be informed by behaviour change models and should recognise the importance of patient empowerment.

Key policy documentation relevant to delivery of diabetes care

- Diabetes Action Plan (2010) Quality Care for People with Diabetes in Scotland
  http://www.scotland.gov.uk/Publications/2010/08/17095311/0

  http://diabetesinscotland.org.uk/Publications/Final%20report%20of%20the%20Type%201%20Diabetes%20Short%20Life%20Working%20Group.pdf


  www.sign.ac.uk


Other relevant policy documents

- Shifting the Balance of Care Scotland 2006
3. Assessing need

An evaluation of local need should be undertaken. This should take the form of a training needs analysis, targeting a wide range of healthcare professionals. All staff working in healthcare will come into contact with patients with diabetes and many will provide services for them.

An Education Subgroup of the local Diabetes Managed Clinical Network is recommended. The group will identify training needs and oversee the provision of locally relevant training initiatives.

4. Strategic aims of an MCN education sub group

Aim: To set out opportunities for appropriate and relevant professional diabetes training, education and development to meet the needs of people with diabetes.

Objectives:
- To ensure sustainable diabetes education provision
- To ensure sustainable diabetes service provision
- To support delivery of diabetes care to people with diabetes in community or hospital settings
- To ensure educational programmes are relevant and evidence based
- To recognise the role of all providers of diabetes care
- To facilitate access to appropriate diabetes education and training
- Support the development of new and existing roles across the care spectrum
- To develop strategy in collaboration with patient support group

5. Training requirements

Knowledge of how to access information for people with diabetes, 'mydiabetesmyway' and locally available health improvement resources e.g. MCN diabetes guidelines is essential and specific diabetes training modules for health care professionals available on line.

Access to learning methods courses for health care professionals delivering diabetes care and education is recommended

Recommendations for appropriate training and development for staff with patient contact:
1. Staff groups involved in providing a key role in diabetes care, specifically General Practitioners and Practice Nurses, should in addition to having appropriate experience in diabetes care undertake an approved diabetes training course provided by a diabetes multidisciplinary team. It should also be considered good practice for specialist podiatrists and dietitians, or pharmacists undertaking medication review to undertake such a course.

2. Other trained health care professionals providing care and advice to people with diabetes e.g., nurses, non-specialist podiatrists or dietitians, physiotherapists, occupational therapists, pharmacists and optometrists should be able to demonstrate they can apply appropriate skills for health competencies identified for their post. Diabetes is seen to be less of a core part of their role but there is a range of opportunities to raise awareness of diabetes and provide some basic skills and knowledge.

3. It is recommended that other staff providing care e.g., nursing assistants, care home assistants, social workers, people working in educational establishments, police officers and prison workers should undertake training in diabetes management or demonstrate they can apply the knowledge and skills for their post as identified where appropriate. There is also a need for those coming in contact with patients but not providing direct clinical care, such as receptionists and catering or portering staff to have some knowledge about relevant issues relating to diabetes.

Training should be linked to professional group competencies e.g TREND for nursing staff, DUK for dietitians and frontline staff.

6. Monitoring quality and outcomes

To achieve the aims of an effective workforce programme in diabetes a structure for monitoring quality and outcomes should be designed

Key considerations will be:
1. All training and education sessions will be evidence-based and in line with national guidelines e.g. SIGN.
2. To monitor the uptake of professional education and training opportunities
3. To evaluate continually all educational opportunities in diabetes to ensure feedback on content and to aid development of current and future opportunities.
4. To ensure staff are confident and competent to deliver patient education.
5. To use patient and public partnerships to contribute to educational initiatives and ensure the patient voice is expressed.

7. Developing Partnerships

Educational partnerships should be developed and nourished and new partnership opportunities explored to assist in the delivery of a successful education development programme.
Outcomes of Structured Patient Education

A key outcome of the delivery of structured patient education is that participation will be recorded on SCI-Diabetes. Different descriptors were developed by a working group using Bath’s three levels of education (2009) that were agreed by the Scottish Diabetes Education Advisory Group in February 2012.

**Level 1** refers to education at diagnosis of diabetes. Normally this is undertaken on a one-to-one basis although group education is not excluded.

**Level 2** is ongoing education. This can occur at any time during a person’s lifetime and may be from the time of diagnosis until the person attends a course or it may be after attending a course for the rest of that person’s lifetime. Ongoing education may be offered as a suite of options within the wider context of a programme of learning. It may be undertaken on a one-to-one basis, offered as a drop in group session or through e-learning.

**Level 3** education refers to group education that is structured in format and design. The methods employed may be groups who attend one geographical area or groups who participate through e-learning. Nationally recognized structured education programmes that have been developed within the research framework of a randomized control trial are level 3 education.

Health Boards who have submitted their educational courses or programmes for review and have been assessed as meeting the criteria for structure patient education can complete individual’s SCI-Diabetes records as appropriate.

SCI-Diabetes identifies the following types of diabetes: type 1; type 2; gestational; maturity onset of youth; latent autoimmune diabetes of adulthood; maternally inherited diabetes and deafness; neonatal diabetes (permanent); pancreatic pathology; secondary (drug induced); secondary (disease).
### Appendix

#### Diabetes Care: Mapping the patient/professional journey with the differing roles of patients and professionals throughout the journey

<table>
<thead>
<tr>
<th>Time line</th>
<th>Professionals</th>
<th>Educational theory</th>
<th>Skills required</th>
<th>Professional Knowledge and Understanding</th>
<th>Patient support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis</td>
<td>GP/Consultant DSN/PN</td>
<td>Andragogy/Dictate</td>
<td>• Clear communicator&lt;br&gt;• Facilitator&lt;br&gt;• Listening skills&lt;br&gt;• Empathy</td>
<td>• Expert diabetes clinical knowledge&lt;br&gt;• Knowledge of how to teach information&lt;br&gt;• Knowledge of how to teach a skill&lt;br&gt;• Behavioural change</td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td>GP/Consultant DSN/PN Dietitian Podiastrist</td>
<td>Andragogy/Dictate</td>
<td>Ability to:&lt;br&gt;• impart knowledge;&lt;br&gt;• pace the giving of information;&lt;br&gt;• teach a skill;&lt;br&gt;• reassure.&lt;br&gt;• Discuss changes to lifestyle e.g. food, physical activity, smoking</td>
<td>• Expert diabetes clinical knowledge&lt;br&gt;• Knowledge of how to teach information&lt;br&gt;• Knowledge of how to teach a skill&lt;br&gt;• Behavioural change</td>
<td>Peer support</td>
</tr>
<tr>
<td>Level 2</td>
<td>GP/Consultant DSN/PN Dietitian Podiastrist Psychologist, Schools</td>
<td>Andragogy/Facilitate</td>
<td>• Availability&lt;br&gt;• Discernment&lt;br&gt;• Listening&lt;br&gt;• Ability to:&lt;br&gt;• Empower;&lt;br&gt;• Motivate;&lt;br&gt;• Encourage;&lt;br&gt;• Praise where there is evidence of self-management&lt;br&gt;• Motivational interviewing&lt;br&gt;• Psychological assessment</td>
<td>• Psychological impact (HADS, PIDPAD)&lt;br&gt;• CHO counting&lt;br&gt;• Weight management programmes&lt;br&gt;• Smoking cessation clinics&lt;br&gt;• Facilitation skills&lt;br&gt;• Behaviour change&lt;br&gt;• Care planning around person’s goals and problem solving</td>
<td>Peer support</td>
</tr>
<tr>
<td>Level 3</td>
<td>Team</td>
<td>Self-management resource/Facilitator</td>
<td>• Philosophy of care&lt;br&gt;• Aims and learning outcomes&lt;br&gt;• NICE criteria</td>
<td>• Structured patient education</td>
<td>Peer learning and emotional support</td>
</tr>
<tr>
<td>Level 3</td>
<td>Team</td>
<td>Self-Management/Facilitator</td>
<td>• Availability&lt;br&gt;• Discernment&lt;br&gt;• Listening&lt;br&gt;• Ability to:&lt;br&gt;• Empower;&lt;br&gt;• Motivate;&lt;br&gt;• Encourage;&lt;br&gt;• Praise where there is evidence of self-management&lt;br&gt;• Motivational interviewing&lt;br&gt;• Psychological assessment</td>
<td>• Structured patient education&lt;br&gt;• Intensive insulin therapy&lt;br&gt;• Motivational interviewing&lt;br&gt;• Promoting behavioural change&lt;br&gt;• Counselling&lt;br&gt;• Empowering&lt;br&gt;• Self-management&lt;br&gt;• Long term conditions&lt;br&gt;• Peer review for others&lt;br&gt;• Quality assurance&lt;br&gt;• CHO and insulin dose adjustment</td>
<td>Peer support</td>
</tr>
</tbody>
</table>
Terminology

It is important that the same language is used when referring to submitted Programmes. For this purpose, a list of the most common terminology used is presented. This is in sequential order.

**Programme**
This relates to an entire educational experience. Normally education will be delivered over several hours, days or weeks. Programme relates to all the sessions delivered.

Some Programmes may be delivered over one session e.g. Diabetes Footsteps developed under the auspices of Fife Health Board. A one session programme is still required to meet all the criteria of a programme.

**National Course**
This relates to those courses that have been developed under the auspices of research, normally a randomized control trial. Examples are:

DAFNE, DESMOND, X-PERT Diabetes.

A national course is not required to be reviewed using the APEDS and TAPEDS so long as it is being reviewed by its authorizing body and it has not been modified in any way.

**Session**
This relates to one individual educational experience. It may occur in a group setting or on a one-to-one setting. It may be conducted face-to-face, over the telephone or other media.

**Ongoing education**
This relates to level 2 education. As such, it normally relates to one individual educational session. However, any level 2 education submitted for review must meet the criteria of a programme.

**Indicative content**
This is a list of topics that will be addressed. The indicative content may refer to the whole programme or may refer to one teaching session.
## Management of Patients with Newly Diagnosed Type 1 Diabetes

### Care Pathway

<table>
<thead>
<tr>
<th>Timescale</th>
<th>Process</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis – 1 month</td>
<td>Individual appointment on day of diagnosis with DSN</td>
<td>Commence insulin therapy and blood glucose monitoring.</td>
</tr>
<tr>
<td></td>
<td>Second appointment as group or individual with DSN – week 1</td>
<td>The patient:</td>
</tr>
<tr>
<td></td>
<td>Individual appointment with Dietitian – week 2</td>
<td>• Can give own injections and monitor blood glucose</td>
</tr>
<tr>
<td></td>
<td>Appointment with Consultant – week 3</td>
<td>• Understands basic action of rapid and background insulin and the names of their own insulin</td>
</tr>
<tr>
<td></td>
<td>Patient books into next available group session</td>
<td>• Understands they can follow a ‘normal’ healthy diet and start to make any adjustments to diet required</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Understands that carbohydrate raises blood glucose and will determine their insulin doses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Has basic knowledge of hypo and hyperglycaemia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Knows who to contact for help</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Knows to inform DVLA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Has had the opportunity to meet DSN, Dietitian and Consultant</td>
</tr>
</tbody>
</table>
### Care pathway for management of newly diagnosed Type 1 Diabetes

<table>
<thead>
<tr>
<th>Timescale</th>
<th>Process</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 month – 1 year</td>
<td><strong>Attend group programme for newly diagnosed over 4 sessions (Time - 9.30-12.00)</strong>&lt;br&gt;<strong>Patients will attend next available session and attend all four sessions in total.</strong>&lt;br&gt;<strong>Each session will include general discussion and a formal education with a different lead each time</strong>&lt;br&gt;DSN lead – what effects BG&lt;br&gt;Psychology lead – coping with DM&lt;br&gt;Dietitian lead – carbohydrate awareness&lt;br&gt;Doctor lead – living with DM&lt;br&gt;<strong>Timetable of morning:</strong>&lt;br&gt;• Group discussion&lt;br&gt;• Opportunity for questions&lt;br&gt;• Opportunity for individual review with any member of team if required&lt;br&gt;• Blood forms given for next session&lt;br&gt;• MDT meeting to discuss all patients at end of session</td>
<td><strong>By the end of the first year the patient will:</strong>&lt;br&gt;• Have had the opportunity to discuss implications and experience of living with diabetes with other people with diabetes, the MDT within a group, and with the MDT as an individual if required.&lt;br&gt;• Have their diabetes monitored by blood results&lt;br&gt;• Have been introduced to psychology services&lt;br&gt;• Have begun the process of carbohydrate counting and insulin dose adjustment&lt;br&gt;• Be able to check background insulin dose and alter if necessary&lt;br&gt;• Understand and treat hypoglycaemia&lt;br&gt;• Understand sick day rules&lt;br&gt;• Understand implications of exercise and how to adjust insulin and food for it&lt;br&gt;• Understand the purpose of screening visits&lt;br&gt;• Be offered NewDEAL if appropriate</td>
</tr>
</tbody>
</table>

At the end of year 1 patient’s will be reviewed in Type 1/ young person’s clinics.
Newly diagnosed Type 1 Pathway

Overall aim of intervention
To enable the patient to self-manage their diabetes in relation to diet. Equipping the patient with the knowledge and understanding of the relationship between diet and the safe management of blood glucose.

Initial consultation with DSN to commence insulin

Key Concepts
The patient appreciates and understands that:
- High sugar drinks cause a sharp rise in Blood Glucose (BG) levels and should be avoided.
- Starchy CHO foods generally cause a more gradual rise in BG levels and are required at each meal when on insulin to prevent BG levels from dropping.
- Breakfast, Lunch and Dinner including some starchy CHO should be eaten every day. Depending on insulin regimen snacks may also be required.

Consultation
- DSN will complete basic diet recall with particular reference to intake of high sugar drinks and fruit juices, eating pattern and the presence of starchy carbohydrate (CHO) at meals.
- First line information will be given by DSN verbally

First line dietary recommendations will be as follows:
- Stop full sugar drinks.
- Have 3 meals per day, at regular times, containing starchy CHO.
- Depending on insulin regimen bed-time, mid-morning and mid-afternoon snacks may also be recommended.

- Written information – NDRi “Diabetes – Healthier Eating” will be provided.
- A 3 day food diary will be provided to be completed by patient prior to first dietetic consultation.

Initial consultation with dietitian
Within 7 - 10 days of diagnosis. Consultation will last 30 to 45 minutes as necessary.

Key Concepts
What is diabetes?
The patient:
- Understands that in type 1 diabetes the pancreas no longer produces insulin, resulting in raised blood glucose levels.

Carbohydrate and blood glucose management.
The patient:
- Is aware of the different nutrients in the diet.
- Is able to identify which foods contain CHO
- Understands that CHO is the nutrient that has a direct effect on blood glucose levels.
- Understands that CHO requires insulin to be used properly in the body.
- Understands why regular meals (and snacks depending on insulin regimen) containing CHO should be included in the diet.

Identification and treatment of hypoglycaemia.
The patient:
- Appreciates that a blood hypoglycaemia is a blood glucose level of less than 4mmol/l
• Understands why hypoglycaemia should be treated immediately with 15g rapid acting CHO.
• Is aware that a hypo treatment should be carried at all times.
• Is able to list examples of 15g rapid acting CHO.
• Understands, if a meal is not due, why this should be followed-up by 10-20g slow acting CHO.

Key concepts are a guide for each consultation, and may on occasion be carried forward to the next consultation. For the majority of patients, all key concepts should be covered by the time that the patient is discharged from dietetic care. Occasionally it may not be appropriate to cover all key concepts with certain patients due to their ability to retain information or their readiness to change.

Additional Concepts
What is diabetes.
The patient:
• Understands that type 1 diabetes is an ‘autoimmune’ condition where the body destroys its own beta cells. Beta cells are the cells in the pancreas that produce insulin. In type 1 diabetes the body no longer produces its own insulin.
• Understands the relationship between high blood glucose levels, increased urinary excretion and thirst (osmotic symptoms).
• Understands that weight loss occurs when there is lack of insulin and how ketoacidosis develops.

Additional concepts are not essential but may be covered with some patients seeking a greater understanding.

Assessment Phase
Build relationship and rapport. Establish patient story.

Assessment may include; background, details of lifestyle and impact of condition on this. Be sensitive to emotional/cultural/psychological/social factors and how this will influence patient and their ability/willingness to accept advice. Clinical judgement required to establish this.

It may not be appropriate to gain all this information if patient is taking longer to come to terms with diagnosis, or requires a slower pace of intervention, based on their readiness for change.

Dietitian to interpret the following information
• Height, weight, BMI – discussion with patient
• Diet history and normal activity patterns
• Blood glucose levels
• Current insulin regimen/doses

Education phase
Subjects will be covered in an integrated education program. Using a step-wise approach dependent on patient need, to include:
• Regular meal and snack pattern
• Hypos
• Action of insulin/food groups on BG levels
• Basic understanding of relationship between food and insulin with comparison of person with/without diabetes
• Discuss osmotic symptoms if relevant to dietary intake
• Portion sizes – CHO relevant to insulin doses and their situation
• Answer any questions or misconceptions

Dietetic Goal Setting
• Assess readiness to change
• Negotiate intervention – make plan based on outcome of this intervention and consider how to move on to the next consultation. Dietitian may need to employ negotiation skills to facilitate change
• Support and facilitate self management through behavioural change techniques with reinforcement, discuss benefits of change in behaviour (self efficacy, self care, short and long term benefits). Establish patients plan – help them identify what they would like to change
Realistic achievable goals until next review. Suggest/encourage/support/agree changes with patient. Use of the term ‘goals’ may not be appropriate at this stage. Continually reflect-in-action and alter the direction of the consultation according to verbal/non-verbal cues. Consider patients priorities. Their focus may be on insulin injection or BG monitoring.

Evaluation of intervention
Dietitian can evaluate the impact of this intervention through ‘teach back’ to establish understanding, identifying gaps in knowledge, behaviour changes, quality of life and awareness. Establish self efficacy. Any essential key concepts not established in the first consultation should be carried over to the second consultation. Weight, BG, HbA1c are unsuitable measures of intervention at this early stage of condition.

Resources
- Diabetes and Your Diet
- Hypo treatments
- 3 day food diary

Second consultation
2 - 4 weeks from diagnosis, priority as directed by patient

Key Concepts
- Any essential key concepts carried over from first consultation.

Carbohydrate management
The patient:
- Is aware of their CHO prescription for meals and snacks and understands how regulating CHO intake will help to stabilise blood glucose levels.
- Understands that carbohydrate in different forms affect blood glucose at different rates.
- Is able to identify rapid acting carbohydrate which is suitable for hypo treatment.
- Is able to identify carbohydrate foods which do not require insulin.
- Is aware of recommendations for snacking in relation to their insulin regimen and situation.
- Understands, when reading food labels, that the total carbohydrate content should be used when calculating CHO.

Healthy eating guidelines
The patient:
- Is aware of healthy eating guidelines in relation to CHO, sugar, fats, salt, alcohol and fruit and vegetables.
- Understands that healthy eating alone does not improve blood glucose levels.

Management of alcohol
The patient:
- Is aware of the recommended limits for alcohol in relation to healthy eating.
- Is aware that the main risk associated with excess alcohol intake is hypoglycaemia.
- Is aware that if more than 2 units of alcohol are consumed that extra CHO should be consumed afterwards to prevent hypoglycaemia.

Additional Concepts
Carbohydrate management
The patient:
- Is aware of the shortcomings of food labelling e.g. errors and cooking methods.

Management of alcohol
The patient:
- Understands that excess alcohol consumption inhibits the body’s ability to recover from hypoglycaemia.
- Understands how different types of alcoholic drinks affect blood glucose.
- Is aware that insulin adjustment may be beneficial when consuming alcohol and to discuss further with DSN.
Assessment Phase
Teach back and compare food/blood glucose diary from first consultation and discuss any patterns. Assessment may include; background, details of lifestyle and impact of condition on this. Be sensitive to emotional/cultural/psychological/social factors and how this will influence patient and their ability/willingness to accept advice. Clinical judgement required to establish this.

Dietitian to interpret the following information
- Height, weight, BMI – discussion with patient
- Food diary and activity patterns
- Blood glucose levels
- Current insulin regimen/doses

Education phase
Advice appropriate to age, weight, insulin regimen, work patterns, lifestyle, and exercise will be given.

Subjects to be covered based on patient need:
- Review sub-goals from first consultation
- CHO portions
- CHO prescription
- Snacking
- Food labelling
- Healthy eating guidelines
- Alcohol
- Lifestyle issues

Goal Setting
- Advise on and agree priority areas within diet/daily routine. Taking into account social/economic/cultural factors negotiate/agree practical and realistic changes.

Evaluation of intervention
Dietitian can evaluate the impact of this intervention through teach back and use of open question to establish understanding, behaviour changes, quality of life and awareness. Establish self efficacy. Comparison of diet history from first and second consultation.

Weight, BG, HbA1c are unsuitable as measure of intervention at this early stage of condition.

Resources
- Diabetes and Your Diet
- Alcohol
- 10g handy portion list
- Hypo treatments
- Food labelling
- CHO prescription
- 3 day food diary
- CHO prescription

Third consultation
4-6 weeks from diagnosis, priority as directed by patient

Key Concepts
- Any essential key concepts carried over from previous consultation.

Carbohydrate management
The patient:
- Understands the importance of accuracy and timing of CHO portions.

Management of exercise
The patient:
- Is aware that exercise can lower blood glucose levels during, immediately after, or up to 24 hours after exercise.
- Understands that exercise can also raise blood glucose levels if the body has too little insulin.
- Understands to abstain from exercise if ketones are present in the blood or urine.
- Is aware that 20g of extra CHO prior to exercise is usually enough for most moderate activities of 45 mins – 1 hour duration.
- Understands that more intense or prolonged exercise will need more extra CHO and / or adjustment of insulin. Insulin adjustment can be discussed further with DSN. (If patient participates in regular prolonged or high intensity exercise joint consultation with Dietitian and DSN may be required to discuss management).
- Is aware that blood glucose should be tested before and after exercise to inform CHO and insulin adjustment.

Management of illness
The patient:
- Is aware that illness can raise blood glucose levels.
- Is aware that CHO can be taken in alternative forms during illness if appetite is poor.

Diabetic products and sweeteners
- Is aware that ‘diabetic’ products should be avoided as they do not offer any benefit to people with diabetes. They are often high in fat and calories, may have a laxative effect if taken in large quantities and are expensive.
- Understands that Bulk sweeteners are not recommended for people with diabetes.
- Is aware that intense sweeteners are suitable for use by people with diabetes and they do not affect blood glucose levels.

Additional Concepts
Management of illness
The patient:
- Is aware that if blood glucose in more than 13mmol/l on more than 1 occasion, or a 1 off reading of above 17mmol/l with no clear cause, they should test for ketones.
- Understands how diabetes control can deteriorate with illness and how ketoacidosis develops.
- Understands why they should never stop taking their insulin during illness, even if they are not eating and / or vomiting. Insulin doses for illness should be discussed further with DSN.
- Is aware that extra insulin may be required during illness. Insulin doses for illness should be discussed further with DSN.

Assessment Phase
Teach Back and review of second consultation. Compare food diary/ blood glucose diary from first and second consultations and discuss any patterns. Assessment may include; background, details of lifestyle and impact of condition on this. Be sensitive to emotional/cultural/psychological/social factors and how this will influence patient and their ability/willingness to accept advice. Clinical judgement required to establish this.

Dietitian to interpret the following information
- Height, weight, BMI – discussion with patient
- Diet history and normal activity patterns
- Blood glucose levels
- Current insulin regimen/doses

Education phase
Advice appropriate to age, weight, insulin regimen, work patterns, lifestyle, and exercise will be given.

Subjects to be covered based on patient need:
- Review sub-goals from first consultation
- Exercise
- Illness
- ‘Diabetic’ products and sweeteners
- Help patient to identify inconsistencies with quantities and timings of carbohydrate and how this relates to changes in BG.
- Identify areas requiring further education
Goal setting
• Discussion centred on changes patient has made to diet/daily routine in accordance with sub goals set. Encouragement may be required if any difficulties have been encountered with healthy lifestyle recommendations in line with current guidelines.
• Identify difficulties and misconceptions with key concepts
• Review of sub-goals. Patient may be ready to consider setting further sub goals.

Patient led discussion
Based on patient need, when asked patient may wish to review or discuss one or more topic in greater detail.

Evaluation of intervention
Dietitian can evaluate the impact of this intervention through teach back to establish understanding, behaviour changes, quality of life and awareness. Comparison of diet history from first and second consultation. Weight, BG, HbA1c are unsuitable as measure of intervention at this early stage of condition.

Resources
• Diabetes and Your Diet
• Exercise
• 3 day food diary

Fourth consultation
Additional consultation as required
Based on outcome of consultation 3, 8-10 weeks from diagnosis.

Assessment Phase
Teach Back and review of third consultation. Compare food/blood glucose diary from third consultation and discuss any patterns.

Assessment may include; background, details of lifestyle and impact of condition on this. Be sensitive to emotional/cultural/psychological/social factors and how this will influence patient and their ability/willingness to accept advice. Clinical judgement required to establish this.

Dietitian to interpret the following information
• Height, weight, BMI – discussion with patient
• Diet history and normal activity patterns
• Blood glucose levels
• Current insulin regimen/doses

Education phase
Consultation will centre on subjects requiring further discussion and education and will be patient led.

Evaluation of intervention
Dietitian can evaluate impact of this intervention through teach back to establish understanding; behaviour changes, quality of life and awareness.

Key Concepts
• Any essential key concepts carried over from previous consultation.

Additional consultations
As required

Patient may join CHO counting pathway at this point.

Patient may be discharged from dietetic care at this point and can be re-referred by Diabetes team as required.

Currently this pathway of care is delivered on a 1:1 basis. There is scope for part of the education in this pathway to be delivered as Structured Group Education.
Introduction

Within the Western Isles Health Board, adults and children with type 1 diabetes are normally diagnosed by their GP and referred to the Diabetes Specialist Nurse (DSN) for initiation of insulin, education and support.

Patient education is normally conducted on a 1:1 basis although people with diabetes are strongly encouraged to include family members, friends or significant others in any teaching and learning sessions. All communications are an opportunity for engaging the patient in education and more formal education sessions may occur within the hospital clinic, a hospital ward or the patient’s home.

WIDE 1 addresses patient education within the first month of diagnosis of diabetes mellitus that is considered to be at Level 1. At the first visit, the DSN will try and elicit how the person feels emotionally about the diagnosis before beginning any education through open questioning and probing follow up questions from answers given.

In conversation with the newly diagnosed person, the DSN will work with the person to determine the best insulin regime for their lifestyle and what the person with diabetes thinks that he/she can cope with as either a basal bolus or twice a day insulin regime.

The frequency of the patient/professional communications will depend on the patient's lifestyle and as far as possible the DSN will fit in with this. Telephone contact is maintained between formal clinic visits.

Philosophy

People with type 1 diabetes are living with a long term condition. The health care team support individuals holistically to manage their condition emotionally, psychologically and physically. Patient education is driven by patient needs and relevance to the individual with the aims of achieving good diabetes control; minimising the effects of diabetes on their health and well being for the whole of their lives; preventing problems occurring and to live life to its fullest.

Process

In all educational sessions, the DSN will ask specific questions to elicit prior knowledge which will help patients and/or their family to value and reflect on their prior knowledge and experience. The DSN will encourage the patient and/or family to contribute and every comment will be actively listened to.

Patients and/or their family will be actively engaged by asking specific questions related to their care of the DSN. Patients and/or their family will be encouraged to reflect and share their experiences and to ask any questions. All questions will be answered in an honest, open and non-judgmental way.

Western Isles Diabetes Education Type 1 (WIDE 1)

March 2012

Authors: Peigi MacLeod, Lead Diabetes Specialist Nurse; Mairade MacDonald, Diabetes Specialist Nurse; Margretta MacLeod, Special Dietitian with a lead for diabetes; Joan McDowell, Project Lead-Diabetes.
Celebrating Diabetes Education in Scotland

Learning Theory

There are several learning theories that can be adopted in working with individuals. The most prominent theories for one to one teaching in the context of diabetes care are holistic learning theory and facilitation learning theory. As people live with diabetes, they may proceed onto experiential learning theory. It is obvious that emotions affect how people learn and so there is the emphasis on building relationships that are based on trust. There are also a variety of learning theories relevant for children. Each child would be considered within his/her own family context and teaching and learning methods adapted to meet the learning style of the child.

WIDE 1 addresses education at diagnosis of diabetes. There is therefore a spiral curriculum as the DSNs plan a developmental approach to teaching and learning that enhances the patients and/or their family's understanding of the condition through incremental development of key topic areas that are revisited with time and as different situations occur. For each teaching and learning session, the educational theory is integrated into activities by the DSN and the patient and his/her family supported by resources (Table 1).

Table 1: Sample teaching and learning session

<table>
<thead>
<tr>
<th>Specific aspects of theory</th>
<th>Diabetes Specialist Nurse activity</th>
<th>Patient activity</th>
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<tr>
<td>Elicit current knowledge to facilitate learning</td>
<td>The DSN will cover each topic by: 1. Eliciting patients current level of knowledge 2. Asking questions and responding to answers to increase understanding 3. Using patients' experiences from which to learn further 4. Asking the patient if her/she has any further queries before moving on to the next topic.</td>
<td>The patient and/or family will be encouraged to: 1. Recall own experience and knowledge 2. Respond to questions using own prior knowledge and experience 3. Use responses and new knowledge to increase understanding 4. Work out the application of new knowledge to his/her own lifestyle</td>
<td>SIGN (2010) Managing diabetes: a booklet for patients and carers. SIGN, Edinburgh <a href="http://www.sgn.ac.uk">www.sgn.ac.uk</a> Diabetes UK (2009) Understanding diabetes: Your essential guide. Diabetes UK London</td>
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Western Isles Diabetes Education Type 1: WIDE 1 : March 2012

Authors: Peigi MacLeod, Lead Diabetes Specialist Nurse1; Mairade MacDonald, Diabetes Specialist Nurse1; Margretta MacLeod, Special Dietitian with a lead for diabetes1; Joan McDowell, Project Lead-Diabetes2. 1 Western Isles Health Board, 2 NHS Education for Scotland

WIDE 1: Educational programme for people at diagnosis of type 1 diabetes and for the first month after diagnosis

Aim

To promote self care management through patient led education and support from the health care team.

Learning outcomes

After one month of diagnosis patients will be able to:

1. Describe why they take insulin therapy and participate in blood glucose monitoring
2. Demonstrate confidence in their self management
3. Relate the importance of adherence with all recommended treatment, diet, follow up appointments to diabetes self management
4. Recognise, treat and understand hypoglycaemia and determine the cause
5. Recognise, treat and understand hyperglycaemia and determine the cause
6. Actively participate in behaviour change, if necessary, to reduce the risk of diabetes related complications

People with type 1 diabetes are routinely referred to the Dietitian and Podiatrist who specialise in diabetes for education, assessment and support. Retinal screening is undertaken locally and reported on a national basis.

As education is undertaken on a 1:1 basis and patient led, there is no formal order to each learning session. Aims and learning outcomes with indicative content are detailed below that will be addressed in a timely manner.

Aim: Patients would inject insulin appropriately

Learning outcomes

After practice, experience and learning, patients will:

1. Describe how insulin works and it effects on their blood glucose
2. Inject their insulin appropriately and rotate their injection sites
3. Inject their insulin according to the recommending timing in relation to food
4. Demonstrate practical usage of all injecting devices
5. Demonstrate appropriate storage and safe disposal of all equipment.

Western Isles Diabetes Education Type 1: WIDE 1 : March 2012

Authors: Peigi MacLeod, Lead Diabetes Specialist Nurse1; Mairade MacDonald, Diabetes Specialist Nurse1; Margretta MacLeod, Special Dietitian with a lead for diabetes1; Joan McDowell, Project Lead-Diabetes1. 1 Western Isles Health Board, 2 NHS Education for Scotland
Aim: Patients will manage hypoglycaemia appropriately

Learning outcomes
After experience, reflection and learning, patients will:

1. Describe what the term hypoglycaemia means
2. List the most common causes of hypoglycaemia and describe how they would prevent hypoglycaemia
3. Identify their own warning sign of hypoglycaemia and are aware that these may change over time
4. Effectively treat hypoglycaemia and self manage within 24 hours after a hypoglycaemic episode.
5. Reflect on how to avoid hypoglycaemia in a similar situation in the future
6. Ensure that family and/or carers know how to treat a hypoglycaemia.
7. Demonstrate appropriate storage of glucagon and other glucose raising agents if appropriate.
8. Apply the theory of prevention of hypoglycaemia, including driving, to own lifestyle.

Aim: Patients will understand the importance of diet in the management of diabetes

Learning outcomes
After practice, experience and learning, patients will:

1. Recognise which foods contain carbohydrates
2. Identify the different types of carbohydrates, their quantities and their effects
3. Describe the effects of nutrients on their blood glucose
4. Correctly identify foods that are high in fat and aim to avoid them
5. Describe a healthy eating plan balancing carbohydrates with other food types
6. Describe the need to alter their insulin and food intake to accommodate various activities.

Aim: Patients can monitor their own blood glucose and perform ketone testing

Learning outcomes
After practice, experience and learning, patients will:

1. Accurately determine his/her own blood glucose
2. Record own blood glucose in appropriate place
3. Demonstrate appropriate storage and safe disposal of all blood and ketone monitoring equipment
4. Demonstrate accurate testing for ketones
5. Describe when he/she would test for ketones, interpret the results and identify what action he/she would take
6. Actively obtain all their monitoring equipment from their GP on prescription.

Aim: Patients will manage hyperglycaemia appropriately

Learning outcomes
After experience, reflection and learning, patients will:

1. Describe what the term hyperglycaemia means
2. Actively aim for an HbA1c level within recommended range
3. List the most common causes of hyperglycaemia and describe how they would prevent hyperglycaemia
4. Identify the symptoms of a high blood glucose and take appropriate action
5. Apply the sick day rules at the first sign of illness occurring
6. Describe how they would increase blood glucose monitoring and initiate ketone testing when ill
7. Relay their understanding of the role of illness on insulin and food requirements
8. Reflect on how to avoid hyperglycaemia
9. Describe their understanding of when to seek help from the health care team.

Aim: Patients will consolidate their understanding of diet in the management of diabetes

Learning outcomes
After practice, experience and learning, patients will:

1. Describe the role of fruit and vegetables in a balanced diet
2. Describe the effects of alcohol on their blood glucose and actions to avoid the effects of alcohol
3. Identify the causes of hypoglycaemia and ways to avoid this and to treat it.
4. Discuss the effects of exercise on blood glucose levels and dietary ways to offset any hypoglycaemia
5. Describe the role of salt in health care
6. Discuss the action and effects of insulin on meal planning
7. Discuss the importance of weight management in their diabetes control

Aim: Patients will understand the importance of diet in the management of diabetes

Learning outcomes
After practice, experience and learning, patients will:

1. Recognise which foods contain carbohydrates
2. Identify the different types of carbohydrates, their quantities and their effects
3. Describe the effects of nutrients on their blood glucose
4. Correctly identify foods that are high in fat and aim to avoid them
5. Describe a healthy eating plan balancing carbohydrates with other food types
6. Describe the need to alter their insulin and food intake to accommodate various activities.

Western Isles Diabetes Education Type 1: WIDE 1 : March 2012

Authors: Peigi MacLeod, Lead Diabetes Specialist Nurse¹; Mairade MacDonald, Diabetes Specialist Nurse¹; Margretta MacLeod, Special Dietitian with a lead for diabetes¹; Joan McDowell, Project Lead-Diabetes².

¹ Western Isles Health Board, ² NHS Education for Scotland
Aim: Patients will actively engage in behaviour change to improve and maintain their health status

Learning outcomes
After experience, reflection and learning, patients will:

1. Carry identification that they have diabetes
2. Carry glucose to treat hypoglycaemia early
3. Aim to stop smoking if they currently smoke
4. Advise the DVLA about their diabetes if they drive
5. Describe the effect of alcohol and, if necessary, aim to alter alcohol consumption to within safe guidelines
6. Develop an appropriate exercise plan

Aim: Patients will actively engage in determining their recommended treatment

Learning outcomes
After experience, reflection and learning, patients will:

1. Describe the purpose of the main blood tests taken at the clinic
2. Describe the importance and purpose of regular clinic appointments to early detect and treat diabetes complications including what happens at the clinic
3. Inform others about their diabetes and carry identification that they have diabetes
4. Detail the influence of diabetes on their general health and ill health
5. Actively participate in annual screening of clinical parameters for diabetes complications
6. Women of child bearing age will be aware of the recommended standards of preconceptual care and care during pregnancy and act appropriately
7. Patients will actively adopt healthy eating and lifestyle choices

Aim: Patients can self-manage their diabetes on a day to day basis

Learning outcomes
After experience, reflection and learning, patients will:

1. Actively manage their insulin, diet and exercise without requiring professional support
2. Seek help from the health care team recognizing their own limitations
3. Utilize relevant phone numbers for professional contacts
4. Utilize Diabetes UK resources including support groups if necessary

References
   http://diabetesinscotland.org.uk/Publications/Final%20report%20of%20the%20Type%201%20Diabetes%20Short%20Life%20Working%20Group.pdf
Resources

Frequently used leaflets
www.sign.ac.uk
Eileanan Siar Western Isles Eat, drink and be healthy this winter – tips and recipes.
Department of Nutrition and Dietetics

Local leaflets
Western Isles Type 1 Diabetes Checklist
Western Isles Diabetes Education Checklist (dietetics)
Western Isles leaflet on eating healthy with diabetes
Healthy eating plate
Posters of a healthy diet – calories, fibres, carbohydrate

Diabetes UK
Employment and diabetes
Eating well with type 2 diabetes
Eating well with type 1 diabetes
Do you have diabetes?
Getting away
DVD: Type 1 diabetes: a new beginning
Diabetes UK website especially driving
Diabetes UK understanding diabetes – ordered in different languages

Dietetic resources
NDR – UK: use all their leaflets

Pharmaceutical leaflets
BD
10 questions about lipodystrophy

Lilly products
Bringing up a child with diabetes
Travel
Healthy living
Driving and employment
Diabetes answers that matter: tablets

Lilly and the RCN
Home blood glucose testing with diabetes
 Sick day rules with diabetes
 Travelling with diabetes
 Drinking safely with diabetes

Top tips for school with diabetes
Body piercing and tattoos with diabetes
Sex and beyond with diabetes
Hypos
Illness
Sex
Insulin
Young people
Travel

Roche
Planning a pregnancy
Man talk
Time to test
Getting behind the wheel
Know the score
Get the low down on hypos
Give your fingers a.rest from testing
When diabetes gets you down
The inside story on diabetes

Sanofi Avenis
What is a hypo? Helping make sense of diabetes

Scottish Executive DVDs
The small video co.ltd. 19 Broomieknowe Gardens, Glasgow G73 3QA 0141 647 4857 www.diabetesdvd.co.uk
E: smallvideo@mac.com

From pills to insulin: for people with type 2 diabetes
Childhood diabetes: The No Nonsense Guide DUK approved
Understanding type 2 diabetes
Pregnancy and diabetes
Type 2 diabetes: The No nonsense guide
Telling it like it is: A guide to pregnancy and diabetes-not suitable for less than 12 years old
Telling it like it is: Diabetes the teenage years

Websites
http://www.mydiabetesmyway.scot.nhs.uk This is the national patient website. It is full of information for people living with diabetes
http://www.diabetes-scotland.org This website is for children and young people with diabetes
http://diabetesinscotland.org.uk This is the main website in Scotland for professionals and people living with diabetes
http://diabetes.org.uk The Diabetes UK website

Celebrating Diabetes Education in Scotland

www.nes.scot.nhs.uk
Western Isles Diabetes Education for People with Type 2 diabetes mellitus (WIDE 2)

March 2012

Western Isles Diabetes Education in Diabetes Type 2 (WIDE 2)

Introduction
Within the Western Isles Health Board, people with type 2 diabetes are normally diagnosed by their General Practitioner (GP) and referred to the Practice Nurse (PN) for education and support.

Patient education is normally conducted on a 1:1 basis although people with diabetes are strongly encouraged to include family members, friends or significant others in any teaching and learning sessions. All communications are an opportunity for engaging the patient in education and more formal education sessions may occur within the hospital clinic, a hospital ward, a general practice or the patient’s home.

WIDE 2 addresses patient education within the first three months of diagnosis of diabetes mellitus that is considered to be at Level 1. At the first GP clinic visit, the PN will first try and determine how the person feels emotionally about the diagnosis before beginning any education through open questioning and probing follow up questions from answers given.

In conversation with the newly diagnosed person, the PN will work with the person to determine their lifestyle and what changes the person with diabetes will need to make in their daily living to adjust to diabetes self management.

The frequency of the patient/professional communications will depend on the patient’s lifestyle although people are normally given a clinic appointment within 3 months of diagnosis. Telephone contact via the GP surgery can be maintained between formal clinic visits for ongoing education and advice. PNs liaise with the Diabetes Specialist Nurses for advice regarding individual patient’s clinical situations.

Philosophy
People with type 2 diabetes are living with a long term condition. The health care team support individuals holistically within their family context to manage their condition emotionally, psychologically and physically. The health care professional facilitates patient learning and adaptation behaviours to adopt healthy eating and healthy lifestyles. Patients are empowered to self manage their diabetes. Patient education is driven by patient needs and relevance to the individual with the aims of achieving good diabetes control; minimising the effects of diabetes on their health and well being for the whole of their lives; preventing problems occurring and to live life to its fullest

Process
In all educational sessions, the PN will ask specific questions to elicit prior knowledge which will help patients and/or their family to value and reflect on their prior knowledge and experience. The PN will encourage the patient and/or family to contribute and every comment will be actively listened to.

Western Isles Diabetes Education Type 2: WIDE 2: March 2012
Authors: Peigi MacLeod, Lead Diabetes Specialist Nurse1; Mairi MacDonald, Diabetes Specialist Nurse1; Margaret MacLeod, Special Dietitian with a lead for diabetes1; Joan McDowell, Project Lead-Diabetes2.
1 Western Isles Health Board, 2 NHS Education for Scotland
Patients and/or their family will be actively engaged by asking specific questions related to their care of the PN. Patients and/or their family will be encouraged to reflect and share their experiences and to ask any questions. All questions will be answered in an honest, open and non-judgmental way.

Learning Theory

There are several learning theories that can be adopted in working with individuals. The most prominent theories for one to one teaching in the context of diabetes care are holistic learning theory and facilitation learning theory. As people live with diabetes, they may proceed onto experiential learning theory. It is obvious that emotions affect how people learn and so there is the emphasis on building relationships that are based on trust.

WIDE 2 addresses education at diagnosis of diabetes and for the first 3 months. There is therefore a spiral curriculum as the PNs plan a developmental approach to teaching and learning that enhances the patients and/or their family’s understanding of the condition through incremental development of key topic areas that are revisited with time and as different situations occur. For each teaching and learning session, the educational theory is integrated into activities by the PN and the patient and his/her family supported by resources (Table 1).

Table 1: Sample teaching and learning session

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<th>Patient activity</th>
<th>Resources</th>
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<tr>
<td>Elicit current knowledge to facilitate learning</td>
<td>The PN will cover each topic by: 1. Eliciting patients current level of knowledge 2. Asking questions and responding to answers to increase understanding 3. Using patients' experiences from which to learn further 4. Asking the patient if her/she has any further queries before moving on to the next topic.</td>
<td>The patient and/or family will be encouraged to: 1. Recall own experience and knowledge 2. Respond to questions using own prior knowledge and experience 3. Use responses and new knowledge to increase understanding 4. Work out the application of new knowledge to his/her own lifestyle</td>
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Western Isles Diabetes Education Type 2: WIDE 2: March 2012

Aim: Patients will understand the importance of diet in the management of diabetes

Learning outcomes

After three months of diagnosis patients will be able to:

1. Describe what is a healthy diet and make adjustments to their diet to aim for optimum weight
2. Describe the benefits of exercise in relation to diabetes and actively participate in exercise
3. Relate the importance of adherence with all recommended treatment, diet and follow up appointments to diabetes self management
4. Actively participate in behaviour change, if necessary, to reduce the risks of diabetes related complications
5. Identify both hypoglycaemia and hyperglycaemia and know what actions to take
6. Demonstrate confidence in own self management.

People with type 2 diabetes are routinely referred to the Dietitian and Podiatrist who for education, assessment and support. Retinal screening is undertaken locally and reported on a national basis.

As education is undertaken on a 1:1 basis and patient led, there is no formal order to each learning session. Aims and learning outcomes with indicative content are detailed below that will be addressed in a timely manner.

Aim: Patients will understand the importance of diet in the management of diabetes

Learning outcomes

After practice, experience and learning, patients will:

1. Identify the five food groups and the healthy proportions as described in the “Eat Well Plate”
2. Identify different nutrients within foods.
3. Identify the effect of the different nutrients on blood glucose levels.
4. Identify the different types of carbohydrate.
5. Describe the importance of regular meals containing starchy carbohydrate and practice the same.
6. Describe the importance of weight management including the role of diet, portion control and exercise and work towards integrating these into their lifestyle.

Western Isles Diabetes Education Type 2: WIDE 2: March 2012

Aim:

To promote self care management through patient led education and support from the health care team.

Learning outcomes

After three months of diagnosis patients will be able to:

1. Describe what is a healthy diet and make adjustments to their diet to aim for optimum weight
2. Describe the benefits of exercise in relation to diabetes and actively participate in exercise
3. Relate the importance of adherence with all recommended treatment, diet and follow up appointments to diabetes self management
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Learning outcomes

After practice, experience and learning, patients will:

1. Identify the five food groups and the healthy proportions as described in the “Eat Well Plate”
2. Identify different nutrients within foods.
3. Identify the effect of the different nutrients on blood glucose levels.
4. Identify the different types of carbohydrate.
5. Describe the importance of regular meals containing starchy carbohydrate and practice the same.
6. Describe the importance of weight management including the role of diet, portion control and exercise and work towards integrating these into their lifestyle.
Aim: Patients will actively engage in behaviour change to reduce the risks of diabetes related complications

Learning outcomes

After experience, reflection and learning, patients will:

1. Carry identification that they have diabetes
2. Aim to stop smoking if they currently smoke
3. Advise the DVLA about their diabetes if they drive according to their prescribed medication
4. Describe the effect of alcohol and, if necessary, aim to alter alcohol consumption to within safe guidelines
5. Develop an appropriate exercise plan

Aim: Patients will be able to identify both hypoglycaemia and hyperglycaemia and know what actions to take

Learning outcomes

After discussion and learning patients will:

1. Describe what the term hypoglycaemia means
2. Describe the main causes of hypoglycaemia, how to recognize and treat it
3. Describe what the term hyperglycaemia means
4. Describe the main causes of hyperglycaemia, how to recognize and treat it
5. Detail their actions, with their limitations, if they think they have had a hypoglycaemic episode or are hyperglycaemic

Aim: Patients can self-manage their diabetes on a day to day basis

Learning outcomes

After experience, reflection and learning, patients will:

1. Actively manage their diet and exercise without requiring professional support
2. Seek help from the health care team recognizing their own limitations
3. Utilize relevant phone numbers for professional contacts
4. Utilize Diabetes UK resources including support groups if necessary

Aim: Patients will actively engage in determining their recommended treatment

Learning outcomes

After experience, reflection and learning, patients will:

1. Describe the purpose of the main blood tests taken at the GPs surgery
2. Describe the importance and purpose of regular appointments to early detect and treat diabetes complications including what happens at the clinic
3. Inform others about their diabetes and carry identification that they have diabetes
4. Detail the influence of diabetes on their general health and ill health
5. Actively participate in annual screening of clinical parameters for diabetes complications
6. Women of child bearing age will be aware of the recommended standards of preconceptual care and care during pregnancy and act appropriately
7. Patients will actively adopt healthy eating and lifestyle choices

Aim: Patients will actively participate in exercise

Learning outcomes

After discussion and reflection patients will:

1. Describe the benefits of exercise on their cardiovascular system and diabetes control
2. Discuss their current levels of activity
3. Identify reasonable adjustments that they can make to their current activity levels

Aim: Patients will actively participate in diet

Learning outcomes

After practice, experience and learning, patients will:

1. Avoid diabetic products and be able to explain the rational for doing this
2. Identify foods which contain fats; the different types of fat and benefits of decreasing foods containing saturated fat and increasing foods containing mono or poly unsaturated fats
3. Describe the effects of alcohol on health, including weight and blood glucose levels, and aim to incorporate this knowledge into their lifestyle
4. Identify sources of, and foods with, a high salt content and aim to avoid them

Aim: Patients will consolidate their understanding of diet in the management of diabetes

Learning outcomes

After practice, experience and learning, patients will:

1. Avoid diabetic products and be able to explain the rational for doing this.
2. Identify foods which contain fats; the different types of fat and benefits of decreasing foods containing saturated fat and increasing foods containing mono or poly unsaturated fats.
3. Describe the effects of alcohol on health, including weight and blood glucose levels, and aim to incorporate this knowledge into their lifestyle.
4. Identify sources of, and foods with, a high salt content and aim to avoid them.

Western Isles Diabetes Education Type 2: WIDE 2: March 2012

Authors: Peigi MacLeod, Lead Diabetes Specialist Nurse¹; Mairade MacDonald, Diabetes Specialist Nurse¹; Margretta MacLeod, Special Dietitian with a lead for diabetes¹; Joan McDowell, Project Lead-Diabetes².

1 Western Isles Health Board, 2 NHS Education for Scotland
Outcomes of Structured Western Isles Diabetes Education Type 2: WIDE 2: March 2012

Authors: Peigi MacLeod, Lead Diabetes Specialist Nurse1; Mairade MacDonald, Diabetes Specialist Nurse1; Margretta MacLeod, Special Dietitian with a lead for diabetes1; Joan McDowell, Project Lead-Diabetes2.

1 Western Isles Health Board, 2 NHS Education for Scotland

Resources

Diabetes CDM
Diabetes and standards for diabetic care at annual review (Langabhat)

NHS Scotland
Advice about foot care (Langabhat)

Pharmaceutical leaflets

BD
Getting started with diabetes (Langabhat)

Boehringer Mannheim
All about diabetes – for people who require insulin treatment (Broadbay)

Roche
Man talk (Langabhat)
Time to test (Langabhat)
Know the score (Langabhat)
When diabetes gets you down (Langabhat)

Sanofi Avenis
Understanding type 2 diabetes (Broadbay)

Websites

http://www.mydiabetesmyway.scot.nhs.uk
This is the national patient website. It is full of information for people living with diabetes

http://www.diabetes-scotland.org
This website is for children and young people with diabetes

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Participants

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Chrisma Harper  Practice Nurse
Mairade MacDonald  Diabetes Specialist Nurse
Kathy MacKay  Practice Nurse
Margretta MacLeod  Special Dietitian with a lead for diabetes
Peigi MacLeod  Lead Diabetes Specialist Nurse
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Rachel Morrison  Practice Nurse
Helen Stewart  Practice Nurse
Ann Wood  Practice Nurse

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References

http://diabetesinscotland.org.uk/Publications/Final%20report%20of%20the%20Type%201%20Diabetes%20Short%20Life%20Working%20Group.pdf

Frequently used leaflets

www.sign.ac.uk


Eileanan Siar Western Isles Eat, drink and be healthy this winter – tips and recipes. Department of Nutrition and Dietetics

Local leaflets

Western Isles Education checklist for Type 2 patients
New patient with diabetes checklist (Group Practice)
Western Isles Diabetes Education Checklist (dietetics)
Western Isles leaflet on eating healthy with diabetes
Healthy eating plate
Posters of a healthy diet – calories, fibres, carbohydrate

SCI-DC and associated literature (Group Practice)

BHF
Diabetes and Your heart (Langabhat)
Physical activity and diabetes (Langabhat)

Diabetes UK
Employment and diabetes
Eating well with type 2 diabetes
Diabetes UK website
Diabetes UK understanding diabetes
Treating your diabetes with tablets

Patient UK
A low fat and healthy diet leaflet (Borve)

Diabetes Insight
Diabetes Mellitus: dietary advice (Borve)

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1 Western Isles Health Board, 2 NHS Education for Scotland
**DIABETES COMPETENCES FOR COMMUNITY NURSES**

This document has been developed in conjunction with the Diabetes Link Nurses and Diabetes Nurse Specialists working in, and for, Lothian Health Board. These competences were derived from existing competences and have been integrated into one document for ease of access and use. The document should be utilised in conjunction with the excel spreadsheet attached. The excel spreadsheet can be used to provide the evidence of how you as a Community Nurse meet these competences.

These competences are designed to reflect what you are doing in your current practice and to help you identify any learning needs you may have.

Competence can be defined as "the state of having the knowledge, judgement, skills, energy, experience and motivation required to respond adequately to the demands of one's professional responsibility" ¹

These competences require to be completed on a bi-annual basis and will form part of your professional development plans.

Suggested areas for further learning are:

1. PAN Lothian Diabetes Education
2. Situational learning/ shadowing
3. Management of Diabetes Module (QMU)
4. Insulin Resource pack
5. E Learning “Safe use of Insulin” module

If further assistance for completion is required please contact your locality Diabetes Link Nurse or Diabetes Specialist Nurse

Diabetes Competences for Community Nurses: Lothian Health Board: August 2012
Lindsey Anello, Diabetes Specialist Nurse, Jill Little, Diabetes Specialist Nurse, Judy Hamilton, District Nurse
<table>
<thead>
<tr>
<th>Key Content</th>
<th>Identification of Required Knowledge and Skills</th>
<th>Evidence of reflective practice</th>
<th>Any Identified learning needs</th>
<th>Signature/date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COMPETENCY DESCRIPTOR 1</strong></td>
<td>Participates, as a member of the multidisciplinary team, in the care of a person with diabetes</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Personal role in diabetes care as a member of the multidisciplinary team (MDT)</td>
<td>Demonstrates the effective assessment and delivery of quality care to patients with diabetes and their carers e.g. care plan/assessment. Demonstrates knowledge of the MDT approach in the management of diabetes and works effectively as a member of this team</td>
<td></td>
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</tr>
<tr>
<td>Personal accountability and that of other members of the multidisciplinary team</td>
<td>Works within the NMC Code of Professional Conduct (1). Identifies areas for, or demonstrates continual professional development and upkeep of knowledge and skills in diabetes (patient contact, personal study, study days, courses, resource pack). Promotes safe and effective practice as an individual and/or with DN team identifying any areas for development</td>
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</tr>
<tr>
<td>Communication systems and methods of record keeping employed by the multidisciplinary team in diabetes care</td>
<td>Demonstrates knowledge of and appropriate use of all communication systems used in diabetes: Green DN recording book, insulin titration sheets, medical and DN records, Lothian diabetes services contact numbers, bleep systems and availability</td>
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<tr>
<td>Information technology systems for managing the care of people with diabetes</td>
<td>Demonstrates knowledge of and appropriate use of all systems used for communication and collation of information: TRAK, SCI DC Network, GPASS or similar</td>
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</tbody>
</table>
## Competency Descriptor 2

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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of the specific tests used in diabetes care (e.g. HbA1c, blood pressure, random total lipids, eye examination, urinalysis (proteinuria), renal function, foot examination, BMI) and why, when and how often they should be carried out according to individual need</td>
<td>Demonstrates knowledge of, or how to access information of specific tests required - the target ranges, why they are required, and when and how they are carried out: SIGN 116 <a href="http://www.sign.co.uk">www.sign.co.uk</a> (2), Lothian Diabetes Handbook (3) via local intranet link / routine reviews</td>
<td></td>
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</tr>
<tr>
<td>Interpretation, recording and reporting the results of tests</td>
<td>Demonstrates knowledge of target ranges and how to record results using appropriate communication / information technology systems e.g. GPASS or similar</td>
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<tr>
<td>Importance of risk assessment and management in diabetes care</td>
<td>Understands the significance of results outwith target ranges and how to respond (appropriate referral within MDT, liaising with specialist services)</td>
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</tr>
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<tr>
<td>COMPETENCY DESCRIPTOR 3</td>
<td>Shows an understanding of the diagnosis of diabetes and therapeutic interventions in diabetes care</td>
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<tr>
<td>Pharmacological interventions in diabetes care their actions, interactions and possible side effects</td>
<td>Demonstrates knowledge of the action, duration, timing and side effects of oral diabetes agents or how to access this information to inform safe and effective practice (Resource Pack - Balance Guide page 8-9 (4))</td>
<td></td>
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</tr>
<tr>
<td>The influence of diet and nutrition on diabetes and diabetes care</td>
<td>Understands the balance of good health and able to deliver basic dietary advice - identifying obvious dietary modifications required. Make appropriate dietetic referral</td>
<td></td>
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</tr>
<tr>
<td>The influence of physical activity on diabetes and diabetes care</td>
<td>Understands the benefits of regular exercise (insulin sensitivity, reduced weight, BP, mood) along with the effects on blood glucose and therefore advice required regarding diabetes medications or dietary intake if indicated</td>
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</tr>
<tr>
<td>Recognition of the signs and symptoms of complications in the person with diabetes</td>
<td>Understands complications of diabetes, and who is at risk</td>
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<tr>
<td>Prevention of complications through health promotion and health education</td>
<td>Demonstrates knowledge and skills in the health promotion and education required for a person with diabetes and when referral is required</td>
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</tr>
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<tr>
<td><strong>COMPETENCY DESCRIPTOR 4</strong></td>
<td>Contributes to the continuing education of the patient and family/carers about diabetes and diabetes care</td>
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</tr>
<tr>
<td>Lifestyle factors that contribute to the maintenance of health and reduce the risk of complications</td>
<td>Demonstrates knowledge and skills in ongoing health promotion and education of patients and carers (diet, exercise, foot care, smoking cessation) appropriately referring to other members of the MDT if indicated</td>
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<tr>
<td>The importance of informed consent for patients making decisions about their care</td>
<td>Demonstrates patient centered care, ensuring patients are involved in the decision making process and meeting any specific learning needs identified by them</td>
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</table>

Celebrating Diabetes Education in Scotland
## Competency Descriptor 5

**Able to perform blood glucose monitoring and provide education in blood glucose monitoring for patients and their carers as per local guidance**

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>perform the test according to manufacturer’s instructions</td>
<td>Demonstrates ability perform meter calibration, blood glucose testing and quality control procedures along with knowledge of local guidance on blood glucose testing</td>
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<tr>
<td>interpret result and assess other parameters and take appropriate action</td>
<td>Demonstrates knowledge of target blood glucose levels for individual patients and how these are recorded - able to identify significant variations and what to do</td>
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</tr>
<tr>
<td>teach blood glucose monitoring procedure to person with diabetes/carer</td>
<td>Utilise above for patient education</td>
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</tr>
<tr>
<td>identify situations where testing for ketones is appropriate</td>
<td>Understands which patients may require ketone testing and why. Is aware to seek advice from specialist services if indicated</td>
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<tr>
<td>support people with diabetes to interpret results and take appropriate action</td>
<td>Demonstrates ability to motivate and promote self care where appropriate</td>
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<td></td>
</tr>
</tbody>
</table>
### Key Content

### Identifications of Required Knowledge and Skills

<table>
<thead>
<tr>
<th>COMPETENCY DESCRIPTOR 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participates in the safe administration of insulin or the supervision/ongoing education of patients to promote self care. Has knowledge of insulins and equipment required in the community setting</td>
</tr>
</tbody>
</table>

1. **demonstrate a basic knowledge of different insulins, i.e. action, timing, side-effects and treatment**
   - Able to describe the action, duration, timing of commonly used insulins (Resource pack - Balance Guide pg 12-13 (4)). Also describe the main side effect of insulin therapy - hypoglycaemia what this is, causes, signs/symptoms and treatment

2. **demonstrate a knowledge of insulin administration and devices used locally e.g. syringes, needle length, pen devices**
   - Demonstrates understanding of insulin administration and use of devices e.g. drawing up and leaving insulin for patients to self administer, patients using insulin pen devices (refer to RCN guidance for Community Nurses document "Advance preparation of insulin syringes for patients to administer at home" (5)) Also has knowledge of who to contact if review of devices required

3. **teach basic method of insulin administration**
   - Understands injection technique - needle length, sites and rotation to prevent lipohypertrophy (Resource Pack - BD Logo & BD Microline 044 March 2010 insert).

4. **assess individual patient's educational needs and meet these needs or refer on as appropriate**

5. **recognise when treatment needs to be adjusted**
   - Able to interpret results and take appropriate action using agreed documentation. Demonstrates appropriate use of insulin titration sheets

6. **recognise the potential psychological impact of insulin therapy and offer support to a person with diabetes and significant others**

### Evidence of reflective practice

### Any Identified learning needs

### Signature/date
Different format required?

This resource can be made available, in full or summary form, in alternative formats and community languages. Please contact us on 0131 313 8061 or email altformats@nes.scot.nhs.uk to discuss how we can best meet your requirements.

Ten material może być udostępniony jako streszczenie lub pełen tekst w innych formatach i językach. Promisy o kontakt pod numerem telefonu 0131 656 3200 lub pocztą elektroniczną pod adresem altformats@nes.scot.nhs.uk by przedyskutować Państwa konkretne wymagania.