Western Isles Diabetes Education for People with Type 1 diabetes mellitus (WIDE 1)

March 2012
Western Isles Education in Diabetes Type 1 (WIDE 1)

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.
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\(^2\). As people live with diabetes, they may proceed onto experiential learning theory\(^3\). 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\(^2\). 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>
<th>Resources</th>
</tr>
</thead>
<tbody>
<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.sign.ac.uk">www.sign.ac.uk</a> Diabetes UK (2009) Understanding diabetes: Your essential guide. Diabetes UK London</td>
</tr>
<tr>
<td>Emotion management; verbal reasoning role modeling</td>
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</tbody>
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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 hypoglycemia and determine the cause
5. Recognise, treat and understand hyperglycemia 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.
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 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 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 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 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 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
Aim: Patients will engage the health care team for ongoing education

Learning outcomes

After experience, practice, reflection and learning patients will:

1. Alter their insulin and food intake to accommodate various activities
2. Seek professional assistance in learning insulin: carbohydrate ratios
3. Seek appropriate support to lose weight if required
4. Seek professional support for advice regarding insulin and food intake when embarking on long distance travel.
5. Seek professional support and advice for erectile dysfunction (if appropriate)
6. Seek professional support and advice if there is any evidence of the complications of diabetes

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 Avensis
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

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