IMPROVING DIABETES CARE IN SCOTLAND 2018
UNDERSTANDING THE PRESENT AND SHAPING THE FUTURE
Education Update
SDEAG
Shaping the Future
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Shaping the Future Stirling 2018
# Diabetes in Scotland: Priorities for Improvement

**Aim:** To improve the experience and clinical outcomes for patients living with diabetes across Scotland.

## Prevention and Early Detection of Diabetes and its Complications

To establish and implement approaches to support the prevention and early detection of type 2 diabetes, the rapid diagnosis of type 1 diabetes and the implementation of measures to promptly detect and prevent the complications of diabetes.

## Type 1 Diabetes

To improve the care and outcomes of all people living with type 1 diabetes.

## Person-Centred Care

To ensure people with diabetes are enabled and empowered to safely and effectively self-manage their condition by accessing consistent, high quality education and by creating mutually agreed individualised care plans.

## Equality of Access

To reduce the impact of deprivation, ethnicity and disadvantage on diabetes care and outcomes.

## Supporting & Developing Staff

To ensure healthcare professionals caring for people living with diabetes have access to consistent, high quality diabetes education to equip them with the knowledge, skills and confidence to deliver safe and effective diabetes care.

## Inpatient Diabetes

To improve the quality of care for people living with diabetes admitted to hospital by improving glucose management and reducing the risk of complications during admission.

## Improving Information

To ensure appropriate and accurate information is available in a suitable format and effectively and reliably used by all those involved in diabetes care.

## Innovation

To accelerate the development and diffusion of innovative solutions to improve treatment, care and quality of life of people living with diabetes.

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- To ensure appropriate and accurate information is available in a suitable format and effectively and readily used by all those involved in diabetes care.

### Innovation
- To accelerate the development and diffusion of innovative solutions to improve treatment, care and quality of life of people living with diabetes.
Type 1 Structured Education

RECLAIM

FOOTSTEPS

HEIDI

BERTIE

DAFNE

CARBIT

TOBE

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**Know the Numbers**

Every person with Type 1 diabetes has to manage their condition to live a healthy, happy life. This quick guide shows the blood glucose readings that you should be aiming for.

**Blood Glucose Guidance for Type 1 Diabetes**

<table>
<thead>
<tr>
<th>Hba1c (Shows control over 3 months)</th>
<th>7 Day Average (of daily blood glucose checks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 58 mmol/mol</td>
<td>Aim for 8 mmol/l</td>
</tr>
</tbody>
</table>

**What to Aim For During the Day**

<table>
<thead>
<tr>
<th>Before Breakfast</th>
<th>Before Meals</th>
<th>2 Hrs After Meals</th>
<th>Bedtime</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-7 mmol/l</td>
<td>4-7 mmol/l</td>
<td>5-9 mmol/l</td>
<td>6-8 mmol/l</td>
</tr>
</tbody>
</table>

**Top 3 Tips for Managing Blood Glucose**

1. Give insulin 5-15 minutes before meal times
2. Check your blood at least 5 times a day
3. Improve your carb counting skills... 1... 2... 3

Remember, a lot of things can affect your blood glucose readings such as shift work, exercise and illness. Do you need a little help? Is there something you’re struggling with? Keep talking to your Diabetes Team about how to improve your self-management.

**Hba1c - How Are You Doing?**

- **Excellent diabetes control**: Hba1c is below 42 mmol/mol
- **Need a little bit of help**: Hba1c is between 42 and 69 mmol/mol
- **You’re doing really great!**: Hba1c is between 42 and 75 mmol/mol
- **It’s time to make changes**: Hba1c is between 75 and 86 mmol/mol
- **You’re at risk of DKA, let us help you now!**: Hba1c is above 86 mmol/mol

**Risk Rating of Complications**

- **Low**: Hba1c 42-69 mmol/mol
- **Medium**: Hba1c 70-97 mmol/mol
- **High**: Hba1c 98-119 mmol/mol

**Average Blood Glucose**

- **Low**: 7.0 mmol/l
- **Medium**: 7.8 mmol/l
- **High**: 9.4 mmol/l

**Things to Remember**

Your Hba1c is a measure of your blood glucose over the last 8–12 weeks. The target Hba1c for people with Type 1 diabetes is less than 58mmol/mol.

Very high blood glucose levels will put you at risk of developing Diabetic Ketoacidosis (DKA) which if left untreated could cause you to become seriously ill and need an emergency hospital admission.

Lowering your Hba1c by just 10mmol/mol reduces your risk of complications by 20%.

<table>
<thead>
<tr>
<th>Date:</th>
<th>Current Hba1c:</th>
<th>Last Hba1c:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Discussions:**

**Next steps:**

—

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T2 Structured Education

X-pert Diabetes

Footsteps

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Structured diabetes patient education in Scotland

Dr Joan McDowell
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Professor Sandra MacRury
BSc, MSc, PhD, Consultant Endocrinologist, Raigmore Hospital, Inverness, UK

Abstract
This article describes how Scotland is addressing the need to review structured diabetes education to support self-management and record this on the national database. A National Education Coordinator (NEC) was appointed to lead the development of structured diabetes education. The NEC was supported by an education lead from the 14 health boards and representation from paediatric, minority ethnic and patient groups. Through literature searching, discussion, workshops and a consensus process, the criteria for structured patient education were established and reviewed for the Scottish context. A process to review education programmes was developed and reviewed on the national database. Reviews are ongoing, and patients and carers, including those who receive diabetes education, are able to see the national database. The website is regularly updated.

It was concluded that Scotland has a process to review patient education programmes to whether they meet structured education criteria, and a process to record attendance at this education on the national database. This website is continually updated and reviewed.
Education

• Patient Handbooks
• Leaflets
• Websites
• Pregnancy
• Insulin Pump starts
• Rolling Programs/Topics
• Education Days
• CGM starts
• Apps CHO/fitness

• Health care professional education
• House of Care
• On Line
• My Diabetes My Way
• Think Check Act
• 3rd Sector

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**KNOW THE NUMBERS**

Every person with Type 1 diabetes has to manage their condition to live a healthy, happy life. This quick guide shows the blood glucose readings that you should be aiming for.

**BLOOD GLUCOSE GUIDANCE FOR TYPE 1 DIABETES**

<table>
<thead>
<tr>
<th>HbA1c (AVERAGE OVER 3 MONTHS)</th>
<th>7 DAY AVERAGE (LAST BLOOD GLUCOSE CHECKED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 58 Mmol/L</td>
<td>8 Mmol/L</td>
</tr>
</tbody>
</table>

**WHAT TO AIM FOR DURING THE DAY**

<table>
<thead>
<tr>
<th>TIME</th>
<th>INSERT</th>
<th>BEFORE MEALS</th>
<th>2 HOURS AFTER MEALS</th>
<th>BEDTIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEFORE BREAKFAST</td>
<td>✅</td>
<td>✅</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>BEFORE MEALS</td>
<td>✅</td>
<td>✅</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>2 HOURS AFTER MEALS</td>
<td>✅</td>
<td>✅</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>BEDTIME</td>
<td>✅</td>
<td>✅</td>
<td>✅</td>
<td>✅</td>
</tr>
</tbody>
</table>

**TOP 3 TIPS FOR MANAGING BLOOD GLUCOSE**

1. **Give insulin** 5-15 minutes before meal times
2. **Check your blood at least 5 times a day**
3. **Improve your care counting skills** 1... 2... 3...

Remember, a lot of things can affect your blood glucose readings such as shift work, exercise and illness. Do you need a little help? Is there something you're struggling with? Keep talking to your Diabetes Team about how to improve your self-management.

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NEWLY DIAGNOSED WITH TYPE 2 DIABETES

Diabetes UK is the leading UK charity for people affected by and at risk of diabetes. We're here with all the information, advice and support you might need to manage your condition well. We're here to put you in touch with others with diabetes, and campaign tirelessly for better care and improved healthcare services. Our world-class research changes lives and is bringing us closer to a future without diabetes.

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My medicines 14

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This education pack is funded by The Scottish Government Diabetes Improvement Fund

*Mon-Fri 9am-7pm. The cost of calling 0141 numbers can vary according to the provider. Calls may be recorded for quality and training purposes.

The information provided in this guide is correct at time of publication. It is not a substitute for seeking a healthcare professional and is not intended to replace the advice given by a healthcare professional.

Continued overleaf
“The average person with diabetes will spend 3 hours with a Healthcare Professional and will take care of themselves for the remaining 8757 hours in a year”
Uptake of Structured Education

Type 1 Diabetes population: SIMD

- DQ 5, 933, 28%
- DQ 4, 998, 29%
- DQ 3, 768, 23%
- DQ 2, 349, 7%
- DQ 1, 235, 7%
- Unknown, 116, 3%

Deprivation Quintile:

- Shaping the Future Stirling 2018
Insulin Management Home Page

Welcome To Insulin Management Online Learning Programme

This online learning programme has been specifically designed to provide background information and practical advice to support people with type 1 diabetes to make living with diabetes easier and enable you to manage your diabetes more effectively. The content is based upon the Tayside Insulin Management Programme, or TIM as it is also known, which is an education programme for people with Type 1 Diabetes following a basal bolus insulin regimen. TIM was developed to enable people on this insulin regimen to:

- Learn all aspects of carbohydrate counting and insulin dose adjustment.
- Enhance their knowledge and skills in relation to their diabetes.
- Achieve maximum quality of life, while controlling blood glucose levels.
- Reduce the risk of long-term complications.

Carbohydrate counting gives you more choice and flexibility with the type and amount of food you eat. It can also help you maintain your blood sugar levels within your target ranges.
Food labels

Most packaged food has a label which shows nutritional information. Here's an example of a label for a digestive biscuit.

You will see from the label that it shows 'carbohydrate' and then underneath 'of which sugars'. When you are carbohydrate counting you are only interested in the total carbohydrate and can ignore 'of which sugars'.

Carbohydrate is usually shown per 100g of the food or per recommended portion.

Using the portion measure is very simple to do and is useful for foods where you will actually eat that portion size, such as biscuits, yoghurts and cereal bars.

So take a look at the digestive biscuit label:

If you eat 1 biscuit, how much carbohydrate will you be having?

Nutrition information

<table>
<thead>
<tr>
<th>Average values</th>
<th>Per 100g</th>
<th>Per biscuit (14.8g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENERGY (kJ)</td>
<td>2014</td>
<td>298</td>
</tr>
<tr>
<td>(kcal)</td>
<td>481</td>
<td>71</td>
</tr>
<tr>
<td>FAT</td>
<td>21.3g</td>
<td>3.2g</td>
</tr>
<tr>
<td>of which SATURATES</td>
<td>10.1g</td>
<td>1.5g</td>
</tr>
<tr>
<td>CARBOHYDRATE</td>
<td>62.9g</td>
<td>9.3g</td>
</tr>
<tr>
<td>of which SUGARS</td>
<td>16.6g</td>
<td>2.5g</td>
</tr>
<tr>
<td>FIBRE</td>
<td>3.6g</td>
<td>0.5g</td>
</tr>
<tr>
<td>PROTEIN</td>
<td>7.2g</td>
<td>1.1g</td>
</tr>
<tr>
<td>SALT</td>
<td>1.3g</td>
<td>0.2g</td>
</tr>
</tbody>
</table>

Typical number of biscuits per pack: 20
Nutrition

Nutrition is the process of taking food in for health and growth. It refers to all the nutrients that we need to survive and be healthy.

Recap from week 1: There are 5 main macro-nutrients, or 'big nutrients'. Click on each nutrient for more detail:

<table>
<thead>
<tr>
<th>Protein</th>
<th>Fat</th>
<th>Carbohydrate</th>
<th>Fibre</th>
<th>Alcohol</th>
</tr>
</thead>
</table>

Protein is made up of amino acids. These are essential nutrients needed for growth, repair and maintenance of the body.

Protein is found in a wide variety of foods, but is in higher amounts in foods such as meat, fish, eggs, nuts and beans.

It contains 4kcal per gram and excess dietary protein is used as an energy source or stored as fat. Protein is broken down differently in the body to carbohydrate and so does not cause a big rise in blood glucose and so is not counted when carbohydrate counting.
Let's go for a virtual meal!

Welcome to our virtual restaurant, we serve many different types of food and alcohol, including popular cuisine from exotic areas in the world.

You choose, anything you fancy, it is all calorie free!!
Websites regarding Patient Education

There are various websites that support and develop patient education.

In Scotland, the Assessment of Patient Education in Diabetes in Scotland & Tool for the Assessment of Patient Education in Diabetes in Scotland (APEDS & TAPEDS) can be accessed here.

The Reviewers' Handbook for the Assessment of Patient Education in Diabetes in Scotland can be accessed here.

The Diabetes UK Fife voluntary group leads the way for people with diabetes in Fife.

Healthtalkonline is website with patient's stories supports people living with long term conditions like diabetes.

The Knowledge Network provides information and resources on caring for older people.

The digital story library holds a collection of short audiovisual stories about people's real-lived experiences of health and social care in Scotland.

The NHS Institute of Innovation and Improvement Diabetes in-patient workshop hosts patient stories on diabetes and its management in a hospital setting.

Listen to Barbara, as part of the patient voices programme, shares how diabetes lives with her, not Barbara living with diabetes.

Volunteers are often required for many aspects of patient care. Read more about volunteering here.
Vivien Swanson, Wendy Maltinsky, University of Stirling
Blended Learning

- Two weeks pre-
  - diary task
  - BCT questionnaire
- Training intervention Full DAY 1. 0,5 day 2
  - action and coping plans
  - satisfaction questionnaire
- 3 weeks post training
  - BCT questionnaire
- 6 weeks post-training
  - Email follow-up
- 3 months post training
  - BCT questionnaire

11 Boards
165 participants
Multi-professional
The Consultation Framework

We use the MAP framework for delivering interventions and have related this to stages of a consultation to support the process of change. The remainder of this manual will look at the process of change in stages and the accompanying consultation framework and techniques as

<table>
<thead>
<tr>
<th>Techniques/Tools</th>
<th>Consultation Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening</td>
<td>Agenda Setting</td>
</tr>
<tr>
<td></td>
<td>Behavioural Satisfaction</td>
</tr>
<tr>
<td></td>
<td>Share Information</td>
</tr>
<tr>
<td>Motivation</td>
<td>Reveal motivation</td>
</tr>
<tr>
<td>M1</td>
<td>Identify specific behavioural goal</td>
</tr>
<tr>
<td>M2</td>
<td>Discuss options for self-monitoring</td>
</tr>
<tr>
<td>M3</td>
<td>Action (using prompts)</td>
</tr>
<tr>
<td>M4</td>
<td>ACTION and Behaviour Maintenance</td>
</tr>
<tr>
<td>Action</td>
<td>Work out the plan including prompts to build and overcome habits</td>
</tr>
<tr>
<td></td>
<td>Establish social support</td>
</tr>
<tr>
<td></td>
<td>Set review period and processes, commitment and contract</td>
</tr>
</tbody>
</table>

MAP Behaviour Change Process:
Motivation, Action and Prompts
A good action plan should include the following elements (with examples):

<table>
<thead>
<tr>
<th>ACTION PLAN</th>
<th>SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the behavioural goal?</td>
<td>Ride my bike</td>
</tr>
<tr>
<td>When will I do it?</td>
<td>5 p.m. after work</td>
</tr>
<tr>
<td>When will I start?</td>
<td>On Tuesday the 16th of October...</td>
</tr>
<tr>
<td>How often?</td>
<td>Monday, Tuesday and Thursday’s</td>
</tr>
<tr>
<td>For how long?</td>
<td>30 minutes</td>
</tr>
<tr>
<td>How far?</td>
<td>I will cycle the high street and to the next village and back</td>
</tr>
<tr>
<td>Who will support me?</td>
<td>My husband; I know he’ll come with me</td>
</tr>
<tr>
<td>How will I measure this?</td>
<td>I’ll use an app</td>
</tr>
<tr>
<td>How will I know when I have achieved it?</td>
<td>I’ll enter the data each day for 2 weeks and then review and I’ll measure my heart rate too.</td>
</tr>
<tr>
<td>When will I review this plan?</td>
<td>In one month</td>
</tr>
</tbody>
</table>
Behaviour change in five minutes
• Theory based training in BCTs
• self-reported use of BCT in 50% of attendees at 6 week follow-up
• most plans (56%) were rated as high quality
• developing coaching and training network
• developing video clips of BCTs
• positively rated interactive activities and personal behaviour change
• range of professionals

Future plans –