How to complete the learning module...

Marking & feedback guaranteed within 2 months

Each issue of **Diabetes and Primary Care** contains a continuing education module. Each module carries 2 hours PGEA accreditation for GPs; nurses can complete the supplement to use towards their PREP requirements. Participants should be able to complete the supplement within 2 hours. This can then be submitted to the address on the application form for assessment and feedback. Certificates will be awarded to all health professionals completing the supplement to the required standard. No payment is required.

Standards to be achieved

To receive a certificate, the answers provided must meet the following criteria:

1. All questions within the supplement must be answered.

2. The minimum number of answers to individual questions should be given where specified.

3. Factual knowledge around the subject area, plus the case studies, will be compared with specimen answers for accuracy.

4. Questions around your own practice will be assessed for an adequate level of completion. Brief answers are acceptable.

The feedback (GUARANTEED WITHIN 2 MONTHS) will indicate one of two things:

a) You have successfully completed the questions and will be awarded accreditation and a certificate.

b) Your answers have been inadequate, and comments will be provided.

You will also receive a set of specimen answers against which to compare your own work.

EACH MODULE FOLLOWS A STANDARD FORMAT, RELATING TO ONE AREA OF DIABETES CARE

Section 1: Seeks information about your factual knowledge around the subject area

Section 2: Provides factual information to enable you to revise and refresh your existing knowledge (this section will contain no questions for you to answer)

Section 3: Presents two or three case studies to provide you with an opportunity to apply your knowledge to different patient scenarios

Section 4: Invites you to answer questions about the treatment of a number of patients within your practice around the subject area

Section 5: Asks how completion of the supplement will influence your future practice

Diabetes and Primary Care reserves the right to hold back certificates where the above standards have not been met.

INITIATING INSULIN IN PRIMARY CARE

Readers can, if they choose, use this section to gain accreditation and feedback (marking guaranteed within 2 months).

Section 1a. Name three criteria which would suggest that someone with type 2 diabetes needs to start taking insulin.

Section 1b. Name three common fears which make people with diabetes reluctant to start insulin.

Section 2. This section is provided for readers wishing to refresh their knowledge. Readers may choose to defer reading this section until completion of the rest of the module.

INITIATING INSULIN IN PRIMARY CARE

There is currently no clinical guideline about the best way to initiate insulin, but there are a number of factors health professionals should consider when first starting to initiate a patient on insulin. Lack of technical knowledge, i.e. which insulin to use and how to adjust the dose, is often seen as the most important factor, but it is possible to develop local and simple algorithms to work from. Other aspects need equal if not more attention, for example, how to identify when a person needs insulin, how to gain their acceptance, and how to provide adequate education and appropriate follow-up in the early days.

When is insulin required?

In type 1 diabetes, insulin is a lifesaving measure and is initiated at diagnosis. Earlier diagnosis might mean that someone with type 1 diabetes may not be acutely ill, but if they have a low body mass index plus short-term weight loss and ketonuria they will still need to start therapy, ideally within 24 hours. Hospital admission is rarely necessary, but an urgent specialist opinion may be needed to confirm the diagnosis and initiate treatment.

In type 2 diabetes, the point at which insulin is needed will vary. Thinner people, who have less insulin resistance, and in whom progressive ß cell failure is more likely to be the cause of their hyperglycaemia, will probably need insulin within 2 years of diagnosis. Insulin resistance is the initial cause of hyperglycaemia in more obese people, but these people will still develop ß cell failure over time, and many will need insulin at some

point. Indicators which suggest that insulin is required are HbA_{1c} levels above 7.5% (NICE, 2002), osmotic symptoms and close to maximum oral therapy. Overall progression of diabetes is also a factor – the faster the decline in HbA_{1c} readings despite maximum oral therapy, or the development of complications, the more urgent the need for insulin.

Gaining acceptance of insulin

Someone who needs insulin may be reluctant to start therapy for a variety of reasons (see *Table 1*). This is not true for all, as some will welcome insulin as a way of improving their symptoms. The health professional needs to identify what specific barriers exist for each individual in order to gain acceptance of insulin. Some may be practical (e.g. difficulty with handling insulin devices), others based on false beliefs (e.g. insulin causes complications). It is important not to judge or be dismissive, but to treat every concern seriously and discuss how it can be dealt with. Misconceptions need to be corrected, and concerns explored as to what they are based on and why they exist. As health professionals, we may have unconsciously presented insulin in a negative light, with comments such as 'there may be another tablet we can use to keep you off insulin', or even used it as a threat – 'if you don't lose weight I'm going to put you on insulin'. Early discussion, soon after diagnosis, of the inevitability of insulin helps people to understand that gradual ß cell failure does not mean personal failure, that tablets will only work up to a point, and that insulin will then be needed.

Providing education

In type 2 diabetes, much of the education about insulin can precede actually starting to self-inject. Discussing hypoglycaemia, insulin timing in relation to food, and use of blood glucose monitoring to see how well insulin is working, before insulin is needed, can reduce anxieties. Practical information, such as how to give an injection, insulin storage, injection sites, use and care of equipment can also be covered early, accompanied by written information where possible. This means the appointment to initiate insulin is less time-consuming, consisting of checking understanding of information provided previously and dealing with any lasting fears and anxieties.

With type 1 diabetes, the luxury of preparation time does not exist, and it is essential to ensure basic information is followed up over the first few weeks of insulin therapy with more comprehensive information.

Practicalities

Choosing an insulin regimen is important, but it does not have to be a regimen for life and can be changed at a later date to improve glycaemic control or quality of life. It has been shown that the practice of diabetes nurse specialists, who are regularly involved in insulin initiation, varies enormously between individual people with diabetes and also between diabetes centres (Rodgers, 1999). Many factors can influence what choice is made: devices preferred (by both the patient and the health professional), whether a simple regimen is needed, and varying daily routines. For health professionals, having confidence in how to manage the chosen regimen is important, whether this involves injections once, twice, or four or more times daily. Using blood glucose monitoring to assess the effect of specific doses helps to titrate the insulin dose. There is

Table 1. Reasons for not wanting to start taking insulin

- Fear of needles: true needle phobia is rare, but many fears are out of proportion with the simplicity and minimal pain of self-injecting.

- Fear of hypoglycaemia: from previous experience of other people taking insulin, or simply out of ignorance.

- Ability to deal with insulin: related to whether the person will be able to handle the equipment, adjust doses or deal with different situations.

- Feeling of loss of health: when insulin is seen as the beginning of the end, inducing a feeling of mourning related to loss of good health.

- Insulin causes ill-health: observations of others (usually when insulin was introduced too late) leading to personal beliefs that death or complications will follow the introduction of insulin.

- Belief that insulin is unnecessary: linked to lack of understanding of the ongoing disease process and belief instead that stricter dieting or more exercise will mean insulin is not needed.

no reason why people with diabetes should not adjust their insulin from the first day, with practical suggestions from health professionals to help them make decisions.

The aim is not immediate good glycaemic control, and it is important the person starting insulin is aware of this. Rather, the aim is to start on a low dose (e.g. 10–20 units daily) to gain familiarity and confidence, then to increase doses by 2–4 units every few days until blood glucose readings start to improve. The rate of increase will vary – if someone is very symptomatic, quicker increases will help them feel better, but if they are not symptomatic this can be done at a slower speed. Larger doses (50–100 units or more per day) may be needed particularly for those who are obese. Tablets may be continued as well; metformin is continued in most people if tolerated, but continuing other oral agents should also be considered as these agents may help to combat insulin resistance.

NICE (2002) *National clinical guidelines for type 2 diabetes - management of blood glucose*. NICE, London

Rodgers J (1999) The Wessex starting insulin study: practicalities of initiating insulin. *Journal of Diabetes Nursing* **3**: 20–24

Section 3. The answers to these case studies should include the broad aims of treatment, although specific goals may be added where appropriate.

Case study 1

Stuart is 55 years old and has recently joined your practice. He has had type 2 diabetes for 12 years and has an HbA$_{1c}$ of 9.5%.

Questions about case study 1

a) List what additional information you need to decide whether Stuart needs insulin at this point.

b) What discussions would it be helpful to have with Stuart at this point?

Case study 2

Mary is 77 years old, has type 2 diabetes, and a body mass index of 18. There are no further options available to improve her oral therapy. She has osmotic symptoms but is refusing to start insulin.

Questions about case study 2

a) What questions could you ask Mary to be able to influence her decision?

b) How would you describe to Mary why she needs insulin?

Case study 3

Albert is 60 years old, and has had type 2 diabetes for 16 years. Over the past 2 weeks, he has learnt about the practicalities of dealing with insulin, and is starting insulin today.

Questions about case study 3

a) What specific discussions with Albert today will ensure that he is safe?

b) What would be the aims for Albert over the next 2 weeks?

Section 4.   Identify three people with type 2 diabetes in your practice population with HbA_{1c} above 8% who are likely to need to start insulin within the next year, and answer the questions below for each.

	Patient 1	Patient 2	Patient 3
1) Current HbA_{1c} reading (result and date).			
2) HbA_{1c} reading prior to the current one (result and date).			
3) Any osmotic symptoms present?			
4) Any potential for improving oral therapy?			
5) Any potential for improving lifestyle factors?			
6) Are improvements in (4) and (5) likely to reduce HbA_{1c} to below 7.5%?			
7) Do they need insulin: (a) within 3 months, (b) within 6 months, or (c) a longer period than 6 months.			

Section 5. After completing this supplement, identify two or three key points, stating how this will influence your future practice.

1.
2.
3.

EDUCATION SUPPLEMENT APPLICATION FORM

Please send the completed education supplement and application form (or a copy of it) to the address below if you wish it to be assessed. Feedback on your work, plus a set of specimen answers, will be sent to you within 2 months.

Name...
Job title..
Address..
....
.... Postcode.....................
Telephone.................................. Fax...
GMC or UKCC registration number..

Has the programme been effective in meeting your needs?   Yes ☐   No ☐
Comments...
....

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