



UNIT 1 Core aspects of care

Supporting successful self-management in diabetes

Online learning

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See page 101

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Learning objectives

After reading this article, the participant should be able to:

1. Explain the potential benefits of self-care for people with diabetes and the healthcare system.
2. Describe the importance of care planning in diabetes.
3. Outline the role of self-monitoring of blood glucose in self-care.

Key words

- Care planning
- Self-care
- Self-management
- Self-monitoring

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Self-care means keeping fit and healthy, as well as knowing how to take medicines, treat minor ailments and seek help when you need it. It can have a beneficial effect on the person with diabetes and on the healthcare system as a whole, and it can play an important role in preventing some of the complications of diabetes. The aim of this module is to support health professionals to build self-care for individuals with diabetes into their strategies.

Self-care means keeping fit and healthy, as well as knowing how to take medicines, treat minor ailments and seek help when you need it. If you have a long-term condition, self-care is about understanding that condition and how to live with it. So says NHS Choices (2014). But it is much more of a challenge than that for health professionals and people with diabetes alike. In acknowledgement of this, the Health and Social Care Alliance Scotland defines self-management as “the successful outcome of the person and all appropriate individuals and services working together to support him or her to deal with the very real implications of living the rest of their life with one or more long term condition” and provides 10 things that health care teams could do to make a difference (see <http://bit.ly/1KJ1vc3> [accessed 15.04.15]).

The incidence of diabetes is on the increase. Regardless of how much time is spent with the healthcare team providing support for this condition, the individual with diabetes self-manages 24 hours a day, 365 days a year. It is a huge commitment, suddenly and unexpectedly placed on a person untrained in health and diabetes at diagnosis. Health professionals need to encourage people with diabetes to become involved and manage their condition effectively.

The NHS Constitution aspires to put patients at the heart of everything it does (NHS, 2013). It advises that we should “support individuals to promote and manage their own health and that services must reflect, and should be coordinated around and tailored to, the needs and preferences of patients, their families and their carers.” It continues: “Patients, with their families and carers, where appropriate, are to be involved in and consulted on all decisions about their care and treatment.” People, it states, “have the right to be involved in discussions and decisions about their health and care” through education and support to achieve benefits to health in the future.

This theme is continued by the Health and Social Care Alliance Scotland through its “My Condition, My Terms, My Life” programme (see <http://bit.ly/1bZYs32> [accessed 15.04.15]).

What does self-care in diabetes mean?

Traditionally (de Silva, 2011), a wide range of methods have been described as supporting self-management of health – interventions as varied as handing out leaflets, tele-monitoring, intensive telephone coaching and structured education, to name but a few – but more active goal setting and behavioural change interventions are necessary if

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we are to improve health outcomes. Primary care should be central to achieving this.

The UK healthcare system cannot afford to ignore the evidence. Already 30% of the population with long-term conditions accounts for 70% of NHS spending (Department of Health, 2012). Reducing people's dependence on health professionals and increasing their sense of control and well-being is a more intelligent and effective way of working. Living with a long-term condition can have a detrimental effect on people's lives. The incidence of depression is higher in people with diabetes and leads to poorer diabetes self-care and medication adherence, which in turn leads to poorer control and increased complications and healthcare costs (Diabetes UK, 2015b).

Self-management support has been investigated from two directions: information provision and behaviour change (see *Figure 1*; de Silva, 2011). Primary care has many resources to achieve the former but various constraints hinder the latter. Based on the results of almost 600 studies published in the UK and internationally, there is evidence that supporting self-management can improve people's quality of life, clinical outcomes and health service use. The research suggests that proactively supporting self-management and focusing on self-efficacy (individuals' confidence about looking after themselves) and behaviour change can have an impact on clinical outcomes and emergency service use (de Silva, 2011).

The Health Foundation review *Helping people help themselves* outlined practical components of self-care (de Silva, 2011):

- Involving people in decision-making.
- Emphasising problem solving.
- Developing care plans as a partnership between service users and professionals, setting goals and following up on the extent to which these are achieved over time.
- Promoting healthy lifestyles and educating people about their conditions and how to self-manage.
- Motivating people to self-manage using targeted approaches, structured information and support.
- Helping people to monitor their symptoms and know when to take appropriate action.

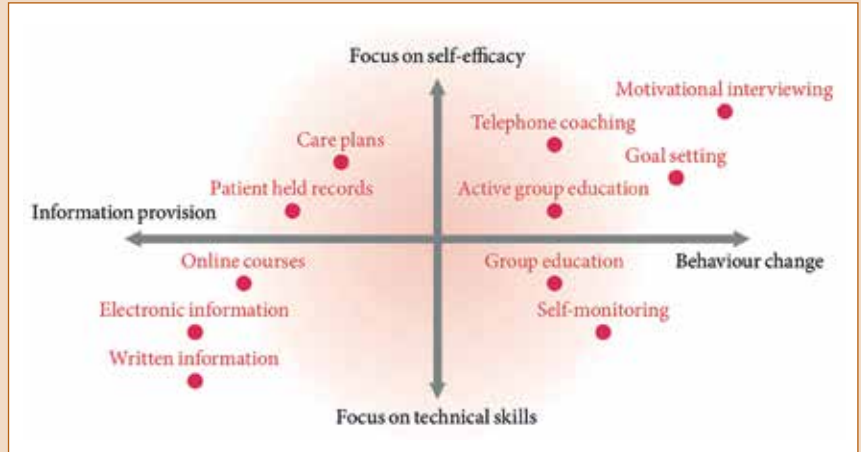


Figure 1. A representation of strategies to support self-management (reproduced with permission of the Health Foundation, from de Silva [2011]).

- Helping people to manage the social, emotional and physical impacts of their conditions.
- Proactive follow-up.
- Providing opportunities to share and learn from other service users.

A useful learning resource in this area for healthcare workers is provided by NHS Education for Scotland and it details four areas to consider: “build partnerships”, “share decisions”, “enthuse and empower” and “facilitate enablement” (see <http://bit.ly/1GXxG95> [accessed 15.04.15]).

Keeping fit and healthy with diabetes

Although people with diabetes spend only a short time with their healthcare team each year, self-care does not mean they have no need for support. The NHS “Your health, your way” indicates five specific areas to support self-management and makes them accessible to people with diabetes through the NHS Choices website (NHS Choices, 2015):

- **Healthy lifestyle support:** helping you improve your diet and exercise regimen.
- **Information:** advice about your condition and its treatment.
- **Training:** helping you feel more confident about living with your condition.
- **Tools and equipment:** making life easier at home.
- **Support networks:** help with finding people to share your experiences with.

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Page points

1. It has long been recognised that knowledge, and in many cases skills, are required to self-manage.
2. However, the 2012–13 National Diabetes Audit found that only 2.4% of people newly diagnosed with type 1 diabetes were reported as being offered structured education and even fewer attended.
3. Learning is a continuous process and not one size fits all.
4. Even if a structured education programme is attended, ongoing support is required to reap health benefits for the longer term.

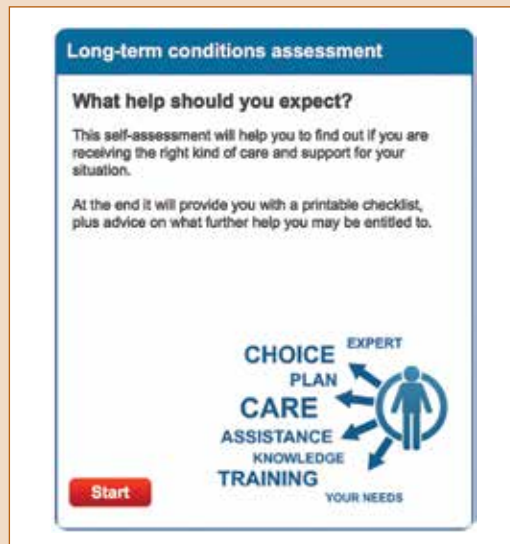


Figure 2. Screenshot of a portal to NHS Choices' long-term conditions assessment (NHS Choices, 2014).

NHS Choices encourages people with long-term conditions, including diabetes, to complete an online assessment on how they manage their condition and forms an action plan for the future (see Figure 2). It encourages people with diabetes to seek answers to their concerns through dialogue with their care team. This would have the additional effect of ensuring that healthcare teams share their knowledge with individuals and keep up to date.

Education to self-manage

It has long been recognised that knowledge, and in many cases skills, are required to self-manage. Yet the 2012–13 National Diabetes Audit found that only 3.9% of people newly diagnosed with type 1 diabetes were reported as being offered structured education and even fewer attended. The numbers

are slightly higher for those with type 2 diabetes (see Figure 3; Health and Social Care Information Centre, 2014a; Diabetes UK, 2015b).

Costings for the provision of structured education vary considerably. In the Republic of Ireland, a detailed comparison between six programmes was published in 2009 (Forde et al, 2009).

NICE (2003) set standards for structured education for people with diabetes and advises that any programme should be subject to evaluation. Variable achievements have been demonstrated. Participation in the X-PERT Programme by adults with type 2 diabetes was shown at 14 months to have led to improved glycaemic control, reduced total cholesterol level, body weight, BMI and waist circumference, reduced requirement for diabetes medication, increased consumption of fruit and vegetables, enjoyment of food, knowledge of diabetes, self-empowerment, self-management skills and treatment satisfaction (Deakin et al, 2006). In contrast, Davies et al (2008) found greater improvements in weight loss and smoking cessation and positive improvements in beliefs about illness, but no difference in HbA_{1c} levels up to 12 months after diagnosis in the DESMOND programme for newly diagnosed people with diabetes. Virtually the same findings were made in 2012 (Khunti et al, 2012).

However, the DAFNE study in 2013 found that people with type 1 diabetes had significant improvements in HbA_{1c} and quality of life at 6 and 12 months (from 76 mmol/mol [9.1%] to 70 mmol/mol [8.6%] and 73 mmol/mol [8.8%], respectively) in a subgroup with suboptimal control (Cooke et al, 2013).

The benefits of one education session tend to decrease 1–3 months after the intervention ceases, suggesting that learned behaviours change over time (Norris et al, 2002). The thing that seems to make a difference is regular and proactive follow-up. In the US, a randomised trial found that the more follow-ups and support sessions that were involved, the more likely people were to control their diabetes (Brown et al, 2005).

The main point we can take from this is that learning is a continuous process and not one size fits all. Even if a structured education programme is attended, ongoing support is required to reap health benefits for the longer term.

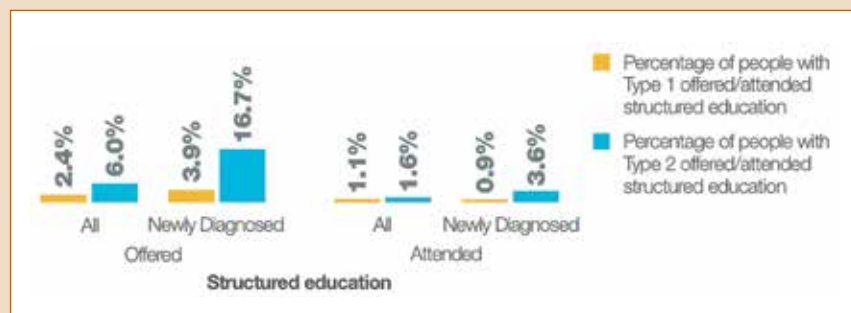


Figure 3. Data on structured education from the 2012–13 National Diabetes Audit (Health and Social Care Information Centre, 2014a; reproduced with permission from Diabetes UK [2015b]).

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Care planning

The now disbanded NHS Diabetes published *Partners in Care* as long ago as 2008. It coined the phrase: “Looking *with* rather than *at* someone with diabetes” (NHS Diabetes, 2008).

Before that, in 2006, *Our health, our care, our say* (Department of Health, 2006) advised:

“By 2008 we would expect everyone with both long-term health and social care needs to have an integrated care plan if they want one. By 2010 we would expect everyone with a long-term condition to be offered a care plan.”

Scotland has an excellent care planning system that enables healthcare teams to share information with people with diabetes. The record is mapped against 15 Healthcare Essentials identified by Diabetes UK (for instance, see <http://bit.ly/1cgSk7j> [accessed 15.04.15]).

Sadly, though, care plans are more advised than implemented. The Diabetes Information Jigsaw survey, also in 2006, confirmed that only 17% of people with diabetes received information about their diabetes treatment every time they were given a prescription, and 8% received no information at all from their healthcare professionals (Association of the British Pharmaceutical Industry et al, 2006).

The 2005 State of the Nations report found significant gaps in the ability of the NHS to empower people with diabetes to manage their condition effectively (Diabetes UK, 2005). In particular, it was felt that the need for organised and planned education was not matched with the support and ability to deliver at a local level. One particular problem in long-term conditions such as diabetes is that the purpose of the consultation is not always clear, either to the person with diabetes or their doctor (Middleton et al, 2006).

In 2007, the Healthcare Commission published their review of almost 70 000 people with diabetes in England (Healthcare Commission, 2007). They found that while 95% of people had diabetes checks at least once a year, less than half discussed their goals in managing their condition.

This goes against *Liberating the NHS: No decision about me without me* (NHS, 2012), where a written record of the care-planning discussion

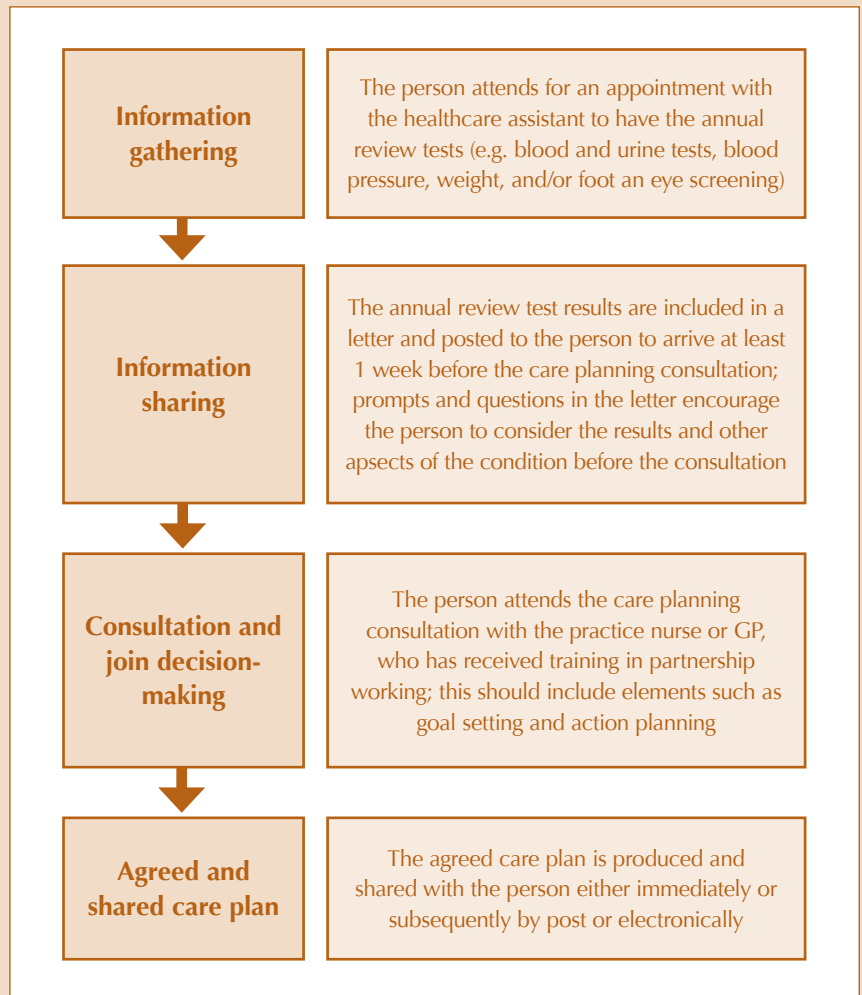


Figure 4. The information sharing process (adapted from NHS Diabetes [2008]).

between a patient and clinician is seen as a vital part of empowering people to manage their condition. The Government’s mandate held the NHS Commissioning Board to account for delivering this. The NHS Constitution introduced a pledge to involve patients in care planning discussions and to offer them a written record of what is agreed, if they wanted one.

Care plans should be designed to assist the person with diabetes (Figure 4; NHS Diabetes, 2008), together with the care team, to agree goals and targets. It should include:

- The goals that have been agreed.
- The support services that are available.
- Emergency numbers and who to contact if unwell.
- A guide to medication (Diabetes UK [2015a] has launched information prescriptions, which

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Page points

1. The NHS spends more on blood glucose monitoring strips than traditional therapies.
2. Controversy exists regarding the effectiveness of self-monitoring of blood glucose in type 2 diabetes. On the one hand it is seen as an expensive option with little evidence to support it; on the other it is seen as a vital tool in engaging people with diabetes in their own care.

will fit into existing GP electronic records and are designed to be tailored to the individual).

- Relevant diet and physical activity information.

A lack of time, a lack of resources and an inability to access relevant training and education may be cited as reasons for not implementing care plans in general practice. While undoubtedly true, the improvements such plans can bring about for an individual's life should encourage teams to lobby for better support for people with diabetes of all ages. Not all aspects of the care plan need be implemented at once, and small changes can make big differences.

Diabetes Quality Statements

In 2011 NICE published its Quality Standards for diabetes (NICE, 2011). There are 14 in all, but number 3 is highly relevant here.

- **Statement No. 3:** People with diabetes participate in annual care planning which leads to documented agreed goals and an action plan.

The requirements to enable the Quality Standards to be implemented were outlined:

- Service providers ensure people with diabetes participate in annual care planning with documented agreed goals and an action plan, and, to support this, provide training for healthcare professionals.
- Healthcare professionals ensure they are competent to support people with diabetes to participate in their care and enable them to agree on specific achievable goals and an action plan in annual care planning.

- Commissioners ensure services are commissioned that provide training for healthcare professionals and encourage people with diabetes to participate in their own care.

- People with diabetes are involved in annual planning for their own care, which includes agreeing on the best way to manage their diabetes and setting personal goals.

It would seem much easier for people to meet a target if they know what it is. The Quality and Outcomes Framework (QOF) tends to drive diabetes goals and targets for health professionals but QOF points are actually achieved by the person with diabetes. Hence, a partnership approach is essential (see *Box 1*; NHS Diabetes, 2008).

Self-monitoring of blood glucose

The NHS spends more on blood glucose monitoring strips than traditional therapies (Health and Social Care Information Centre, 2014b). Do we get value for money and are people with diabetes truly educated in how to make the best use of them? Although a long time ago, *Testing times* found not (Audit Commission, 2000):

“I have no idea whatsoever why I do daily blood checks [...] I have not the remotest idea what I am keeping the record for.”

Controversy exists regarding the effectiveness of self-monitoring of blood glucose (SMBG) in type 2 diabetes. On the one hand it is seen as an expensive option with little evidence to support it; on the other it is seen as a vital tool in engaging people with diabetes in their own care.

Box 1. Some principles of the care planning approach to consultations (adapted from NHS Diabetes [2008]).

- A partnership approach offers people active involvement in decision-making
- A partnership approach is more likely to lead to successful self-management strategies than a dictatorial one
- A person-centred holistic approach is more satisfying and effective in diabetes care consultations
- Healthcare professionals and people with diabetes wish for optimal health and quality of life outcomes
- Preparation for the care planning consultation, including sharing both clinical and practical information about the process, leads to realistic expectations and outcomes

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An online survey by Diabetes UK has shown that there is a widespread problem of people with diabetes being denied the chance to monitor their blood glucose levels because vital test strips are being rationed to save money (Diabetes UK, 2013).

NICE (2009) advises that SMBG is an essential element of self-care if backed by education. Back in 2005, Owens et al outlined a guide to the frequency of self-monitoring of blood glucose (SMBG) according to therapy use (Owens et al, 2005). Few published works improve on the advice therein and it remains a useful guide.

While item cost is an issue, not all meters are the same. Some are useful in type 1 diabetes, assisting with bolus calculations; some are capable of being used with one hand; some have larger visible screens than others; and some highlight patterns of highs and lows to encourage change of medication to suit. Diabetes UK produces a guide to many blood glucose meters (Diabetes UK, 2012).

The authors of the STeP (Structured Testing Protocol) study recognise that while some studies have questioned the value and utility of SMBG, specifically in non-insulin-treated people, more recent research has shown that appropriate use of structured SMBG, combined with education and goal setting, facilitates and reinforces adoption of healthy behaviours and promotes timely and persistent therapy adjustments, resulting in improved clinical and behavioural outcomes (Parkin et al, 2011).

Fasting levels, pre-meal levels or both are a good indication of effectiveness of therapy but post-meal spikes can be an indicator of future cardiovascular risk. The International Diabetes Federation (2011) has published guidance on post-meal testing if HbA_{1c} remains above target but pre-meal self-monitoring levels remain well controlled.

It is when we consider driving that SMBG becomes essential, for those treated with sulphonylureas or insulin. The Driver and Vehicle Licensing Agency's "At a glance guide" should be discussed in self-management plans. TREND-UK (2015) provides useful resources on driving and hypoglycaemia.

Involving people with diabetes in setting self-monitoring goals and targets should be the norm. They should recognise that SMBG is an educational tool that is available to them and to use it wisely.

It should not simply be a paper record that they bring into clinic for interpretation. Three questions to consider asking to aid effective use of strips are:

- 1 Why did you do that test?
- 2 What did you learn from the result?
- 3 What action did you take?

If they cannot answer these questions, perhaps they need to be more involved in education and meaningful goal-setting, or perhaps they are gaining little from self-monitoring.

Health professionals using blood glucose meters should follow the Medicines and Healthcare Products Regulatory Agency (2013) guidance on quality control. Clinicians are responsible for the accuracy of the meters they use and must be confident that alterations to medications are made on quality-controlled meters.

Case study

A case study is presented in *Box 2*.

Conclusion

Self-care can have a beneficial effect on the person with diabetes and on the healthcare system as a whole. Done effectively, it can halt or prevent some of the complications of diabetes. It is up to all health professionals to examine how it works and to build self-care for individuals into their strategies.

The NHS Self Care Forum organises a Self Care Week in November each year. Did you know about it? Do your patients? ■

“Self-care can have a beneficial effect on the person with diabetes and on the healthcare system as a whole.”

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Box 2. Case example.

Jean was diagnosed with type 2 diabetes 2 years ago at age 39. Her BMI was then 32 kg/m². Her control and treatment progressed as follows:

- At diagnosis, she had an HbA_{1c} of 72 mmol/mol (8.7%).
- Four months later, after some lifestyle changes, her HbA_{1c} had improved to 66 mmol/mol (8.2%).
- Metformin was commenced and titrated to 500 mg twice daily.
- Six months later, her HbA_{1c} had improved to 62 mmol/mol (7.8%).
- Her BMI remained at 32 kg/m².

Jean was already taking metformin and had gliclazide added, but, really, she had little understanding of how these agents worked and their potential side effects. She did not like to question her treatment during her 6-monthly diabetes clinic reviews as she knew the practice nurse had only a short time to spare. She focused her attention on discussing her two children and working part time in an office.

She was fortunate in having an X-PERT diabetes course in her area and was able to attend while her parents took care of the children. She requested to start self-monitoring of blood glucose after realising she should have been monitoring from the point of starting gliclazide, as she is a driver. The X-PERT course taught her that pre- and post-meal blood glucose levels contribute to her HbA_{1c} level.

Six months after attending the course, her HbA_{1c} had improved to 58 mmol/mol (7.5%) and her BMI to 30 kg/m².

Owing to her age and short duration of diabetes, her care team agreed that she should try to achieve tighter control, but she wanted to discuss alternative therapies to gliclazide as she was fearful of hypos when driving, especially as she regularly took the children to classes.

Currently she is controlling her diabetes well with a combination of metformin and a dipeptidyl peptidase-4 inhibitor. She now gets copies of her regular blood tests in advance of her practice clinic appointment and she feels motivated to adhere to her care plan as she is a fully contributing member of the team.

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Online CPD activity

Visit www.diabetesonthenet.com/cpd to record your answers and gain a certificate of participation

Participants should read the preceding article before answering the multiple choice questions below. There is ONE correct answer to each question. After submitting your answers online, you will be immediately notified of your score. A pass mark of 70% is required to obtain a certificate of successful participation; however, it is possible to take the test a maximum of three times. A short explanation of the correct answer is provided. Before accessing your certificate, you will be given the opportunity to evaluate the activity and reflect on the module, stating how you will use what you have learnt in practice. The CPD centre keeps a record of your CPD activities and provides the option to add items to an action plan, which will help you to collate evidence for your annual appraisal.

- What approximate proportion of the UK population has a defined long-term condition? Select ONE option only.
 - 15%
 - 30%
 - 45%
 - 60%
 - 75%
- Which of the following is the most appropriate statement about the evidence supporting self-management for people with diabetes? Select ONE option only.
 - Decreased mortality
 - Decreased quality of life
 - Decreased use of the welfare state
 - Improved health service use
 - Improved ability to generate income
- Which of the following strategies to support self-management is most orientated to behaviour change? Select ONE option only.
 - Group education
 - Patient held records
 - Motivational interviewing
 - Telephone coaching
 - Written information
- According to the National Diabetes Audit 2011–12, what proportion of people with newly diagnosed type 1 diabetes were reported as being offered structured education? Select ONE option only.
 - <5%
 - 10%
 - 25%
 - 50%
 - >75%
- According to 2008 and 2012 evidence, which is the most appropriate statement about participants in the DESMOND programme, 12 months after diagnosis of diabetes? Select ONE option only.
 - Decreased mortality
 - Fewer hypoglycaemic episodes
 - Reduced antidiabetic agent requirement
 - Tighter blood pressure control
 - Weight loss improvement
- A 39-year-old man with type 2 diabetes attends a single, well-structured diabetes education session. He is motivated and otherwise well. How long after the event before the positive behavioural benefits most likely start to decrease? Select ONE option only.
 - 1 day
 - 1 week
 - 2 weeks
 - 3 months
 - 1 year
- A healthcare provider is designing care plans for people with diabetes and includes: the agreed goals, support services available, emergency contact numbers and dietary/exercise information. In addition to the above, which of the following is the MOST appropriate to include in a care plan for people with diabetes? Select ONE option only.
 - A guide to medication
 - A named healthcare professional
 - Information about appropriate footwear
 - Information about other relevant long-term conditions
 - Information about prescription-exemption certificates
- Which is the most appropriate statement about diabetes annual review test results? Select ONE option only.
 - Ensure tests are taken at least six weeks prior to the review
 - Ensure test results are available electronically at the review
 - Post test results to the person two weeks before the review
 - Print test results for the person at the time of the review
 - Take blood and urine tests at the time of the review
- According to NICE (2009), self-monitoring of blood glucose is an essential element of self-care, if backed by which one of the following? Select ONE option only.
 - Availability of larger screens on blood monitors
 - Education of patients
 - Increased reliability of meters
 - Lower acquisition costs
 - More evidence from randomised controlled studies
- Which of the following regular blood glucose findings is more likely to indicate future increased cardiovascular risk? Select ONE option only.
 - Pre-meal dips
 - Pre-meal spikes
 - Post-meal dips
 - Post-meal spikes