

# Diabetes education guide

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# Diabetes education guide

All people with diabetes have the right to access high quality evidence based diabetes education and care. Diabetes education is a specialist area of health care requiring high level assessment skills, risk identification and the individualisation of self-care education.

This section of the manual aims to provide an overview of the principles of diabetes education. It provides direction and resources to support education across the continuum of the person's life with diabetes. For those staff employed as a credentialed diabetes educator or diabetes educator it is also important that you refer to your national and health service professional practice standards.

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## Background

The impact of chronic disease and the growing awareness of the role played by people with chronic conditions in determining their own health outcomes has led to greater awareness of the role of self management in chronic disease. Similarly, the need to support people with chronic conditions to acquire self management skills and the confidence to apply these skills in everyday living has also led to the identification and incorporation of self management support and education in a range of chronic disease models including the *National Chronic Disease Strategy*<sup>1</sup> and the *National Service Improvement Framework for Diabetes*.<sup>2</sup>

Unlike acute medical conditions, chronic conditions change over time and are ongoing, with health outcomes and quality of life dependent on client self management and decision making, and the availability of ongoing (versus short term) clinical care and support services. Client-centred approaches in chronic disease management place the person with the condition as the 'expert' rather than the health professional. This does not negate the need for expert or best practice clinical management but recognises that the person with the condition has the absolute power of veto over even the most efficacious clinical management plan.

Diabetes is considered to be one of the most complex of the chronic diseases, requiring the person with diabetes to juggle a range of daily clinical and lifestyle tasks in order to avoid the short and long term complications of diabetes. Diabetes self management education (DSME) aims to build the person with diabetes as an active member of their diabetes team and to improve health status by empowering the person with diabetes to;

- > acquire knowledge (*what* to do)
- > acquire skills (*how* to do it)
- > develop confidence and motivation to perform appropriate self care behaviours (*want* to do it)
- > develop problem solving and coping skills to overcome barriers to self care (*can* do it).<sup>3</sup>

The role of health care providers is to support people with diabetes along this path by providing self management education and support based on the person's risk profile, enabling them to master the tasks required for effective self care and to become an active participant in their diabetes management.

## Chronic disease self management and diabetes self care behaviours

There are two widely accepted models for generic chronic disease self management support. The chronic disease education models arising from Stanford University<sup>4</sup> and the Flinders Human Behaviour & Health Research Unit<sup>5</sup> identify common tasks that a person needs to achieve in order to successfully manage a chronic condition.

The Stanford Model focuses on peer leadership and generic skill development while the Flinders Model is clinician led. Both are designed to be an adjunct to appropriate medical management.

Stanford University	Flinders Human Behaviour & Health Research Unit
recognising and responding to symptoms using medications managing acute episodes and emergencies maintaining good nutrition maintaining adequate physical activity not smoking using relaxation and stress reducing techniques interacting appropriately with health care providers seeking information and using community resources adapting work and other role functions communicating with significant others managing negative emotions and psychological response to illness	know about the condition and various treatment options  be actively involved in decision making in relation to treatment and management of the condition  follow the treatment plan developed with health care providers  monitor symptoms and take appropriate action to manage and cope with symptoms  manage the physical, emotional and social impact of the condition on their life  adopt a lifestyle that promotes health and does not worsen symptoms

The Stanford Model is underpinned by self efficacy theory which is premised on the following:

- > belief in one's ability to perform tasks is a good predictor of motivation and behaviour;
- > self efficacy can be enhanced through skills mastery,
- > goal attainment,
- > modelling and social persuasion;
- > improved self efficacy leads to improved behaviour,
- > motivation,
- > thinking patterns and
- > emotional wellbeing.

The Flinders Model also identifies the Transtheoretical Model as a useful model to guide health professional interventions which should be characterised by collaborative goal definition; targeting, goal setting and planning; training and support for individuals to change; active and sustained follow-up. For more information on health behaviour and health education theory please refer to Appendix 1.

The self management tasks identified by these self management models are congruent with the self care behaviours identified in a technical review undertaken by the American Association of Diabetes Educators (AADE) as being key behaviours for effective diabetes self management.<sup>3</sup> To view the self care behaviours go to Figure 1.

Figure 1

AADE Diabetes Self Care Behaviours
Healthy eating
Being active
Monitoring
Taking medication
Problem solving
Healthy coping
Reducing risks

With permission from the AADE, the Australian Diabetes Educators Association (ADEA) has adopted the AADE self care behaviours and published them in *Diabetes Smart Steps*.<sup>6</sup>

The self care behaviours (Fig 1) provide an easily understood framework and a common language for people with diabetes and diabetes educators to discuss health behaviours and their associated risks and benefits.

## Education and support – role of health professionals.

Providing education and support for the person with diabetes can be shared across different professions and across generalist and specialist nurses. Referral to a diabetes education service is recognised as best practice. Input and advice from a credentialed diabetes educator (CDE) will provide clearly defined education plans and opportunity to discuss how and by who the education can be provided. Referral to allied health professionals such as podiatrists and dietitians is also an important part of the clinical pathway and information about these professionals can be found in other sections of the Diabetes Manual (eg Healthy eating and Foot care sections).

### Credentialed diabetes educators

Credentialed diabetes educators hold a Graduate Certificate in Diabetes Education and have completed the requirements of the national Australian Diabetes Educators Association (ADEA) credentialing program. The role of the diabetes educator includes having expertise and experience in managing people with all types of diabetes. Within their role they assist people to attain the skills to self manage their condition. As specialists, the diabetes educator also has an integral role in supporting other health professionals in the care and support of people with diabetes.

Credentialed diabetes educators (CDEs) are recognised by the Commonwealth Government for the purpose of assessing diagnosis and therefore access to the National Diabetes Services Scheme. The Government also recognises CDEs for Medicare funded services.

Credentialed diabetes educators/diabetes educators may work within a tertiary diabetes service/centre, a community health service, general practice or in private clinics. To find a CDE go to <http://www.adea.com.au/>.

A CDE can provide;

- > Comprehensive assessment and individualised diabetes self management education (DSME)
- > Action plans for sick days, hypoglycaemia, medications and insulin, travel, foot care etc
- > DSME for insulin therapy including multiple dose insulin regimes and insulin pump therapy
- > Assessment of blood glucose including continuous blood glucose monitoring systems.
- > Nutritional education including carbohydrate counting.
- > Insulin adjustment in partnership with GP/endocrinologist (registered nurses only).
- > Preventative and management education related to macro and microvascular complications.
- > Foot risk assessment and self care action plans.
- > Psychosocial support.

All people with diabetes should be offered education and support from a CDE.

The ADEA is the peak body for diabetes education in Australia. The Association provides the practice standards for the delivery of diabetes education services. The ADEA is also charged with the responsibility of overseeing the credentialing of diabetes educators.

Not all diabetes educators decide to become credentialed. Some diabetes educators have done a Post Graduate Certificate in Diabetes and are experienced in their field but for various reasons may decide not to become credentialed.

## Generalist health professionals and diabetes education

Diabetes changes over time and it is important that people with diabetes have access to up to date and consistent information. Any presentation to a health service provides an opportunity to ascertain if the person requires any information or support for their diabetes. For example:

- > A community nurse may be seeing a client for wound care. Whilst doing the clients wound they can assess their understanding of topics such as hypoglycaemia, blood glucose monitoring, foot care and when to seek help.
- > Ward nurses can observe patients self care routines eg insulin administration or blood glucose monitoring. It is also important to ask patients if they have action plans for hypoglycaemia, sick days or foot care.
- > As part of the annual cycle of care, practice nurses can check insulin administration technique and other self management skills and knowledge.

Patients who were found to have knowledge or skill deficits would be referred back to the diabetes educator for review and further education.

### Diabetes management in general practice

General practitioners continue to provide the majority of the care for people with type 2 diabetes and uncomplicated gestational diabetes. Children and adults with type 1 diabetes and women with pre-existing diabetes and pregnancy require regular input from a medical specialist such as an endocrinologist. The complexity of diabetes care requires a systematic approach from the general practice team and timely referral to specialist services as required. The practice manager and practice nurses have an integral role in setting up and maintaining efficient recall systems as part of the Commonwealth Government National Integrated Diabetes Program.

The RACGP Diabetes Guidelines provide GPs and practice nurses with detailed information about managing type 2 diabetes.

<http://www.diabetesaustralia.com.au/en/News--Events1/Whats-New/Diabetes-Management-in-General-Practice-201213/>

Clinical Practice Guidelines: Type 1 Diabetes in Children and Adolescents

<http://www.nhmrc.gov.au/guidelines/publications/cp102>

Pregnancy guidelines

<http://www.adips.org/>

### **Role of the practice nurse**

The role of the practice nurse will vary depending on the competencies of the individual nurse and the setup of the practice. Some practices employ their own CDE while others have practice nurses who take on a specialist portfolio such as chronic disease. It is important that there is differentiation by the practice regarding the level of skills that a practice nurse has in the area of diabetes. For example, a practice nurse who has not trained in the area of diabetes education should offer all of their clients an appointment with a qualified diabetes educator. However, if the practice nurse has attended a suitable diabetes training course, is participating in ongoing professional development and is linked to or mentored by a qualified diabetes educator they may be confident and competent to provide some aspects of the diabetes education program in a shared care arrangement with the diabetes educator.



Within the RACGP guidelines there is information about quarterly and annual nursing reviews for the person with type 2 diabetes. Outcomes of these assessments are usually documented within the general practice patient record system. The assessment will guide the care planning process and ensure that relevant referrals are made eg diabetes educator, dietitian, podiatrist, physiotherapist, exercise physiologist.

The practice nurse is well placed to develop rapport and provide ongoing support for the person with diabetes. Ideally if a person has received education from a diabetes educator and/or dietitian the person will have written information and individualised action plans that the practice nurse can reinforce with the client. It is important that health professionals work together as a team to support clients. Clients should be re-referred back to the specialist team when circumstances or needs change.

### **Diabetes management in hospital**

Hospital is an opportune time to identify those with undiagnosed diabetes and to assess how people are managing their diabetes. For many patients it will be timely to reconnect them with the appropriate health professionals. Nurses working in hospitals need to assess the person's diabetes management including their level of knowledge and skills as part of admission and discharge planning. Supporting patients to self manage aspects of their care while in hospital can also assist the nurses to ascertain whether the person requires further education and support. For more information on in-hospital management please go to Section 4 *Hospitalisation*.

## Diabetes education and support

The overall aim of diabetes education is to assist people with diabetes to acquire the knowledge, skills and confidence to engage in effective diabetes self care practices and be pro-active members of their diabetes care team.

The specific objectives could be to:

- > enhance self efficacy
- > facilitate the adoption of self care behaviours and action plans
- > reduce risk of acute and long term complications
- > reduce diabetes related distress.

To be effective, education should be designed to build on the person's own life skills and behaviours. It should be sensitive and relevant to the individual's needs, goals and their perception of their illness. Changing behaviour will depend on the educator's approach to the person's beliefs and the knowledge the person already has.

People change their behaviour when:

- > they believe their illness will affect their lives
- > they are confident that they can positively affect the outcome of their illness
- > they believe the benefits outweigh the disadvantages of change
- > they are confident that they can succeed
- > it will help them achieve their own personal goals.

Recommendations and advice given to people should be based on careful **assessment** of the **individual's needs and priorities as well as their risk factors**. It is essential to have a broad based knowledge about emotional, cultural and social circumstances. Achievable goals need to be negotiated with the individual.

### A systematic approach to diabetes education and support

All people with diabetes should be referred for diabetes education at diagnosis and then on a needs basis or when management changes. Some services have documented patient pathways which clearly outline best practice principles. For an example of a diabetes pathway go to <http://clearinghouse.adma.org.au/browse-resources/pathway/loddon-mallee-regional-diabetes-pathways/view.html>.

It is important that the person is aware that diabetes education is not a one off episode of care. Instead, diabetes is a lifelong journey of learning. Figure 2 shows the cyclical nature of diabetes education which is based on the changing nature of diabetes and its treatment/management over time. The frequency of which the person is reviewed will depend on a number of factors including;

- > what type of diabetes they have
- > changes in diabetes management
- > their age
- > psychosocial situation
- > self management skills
- > stability and complexity of their condition
- > co-morbid conditions

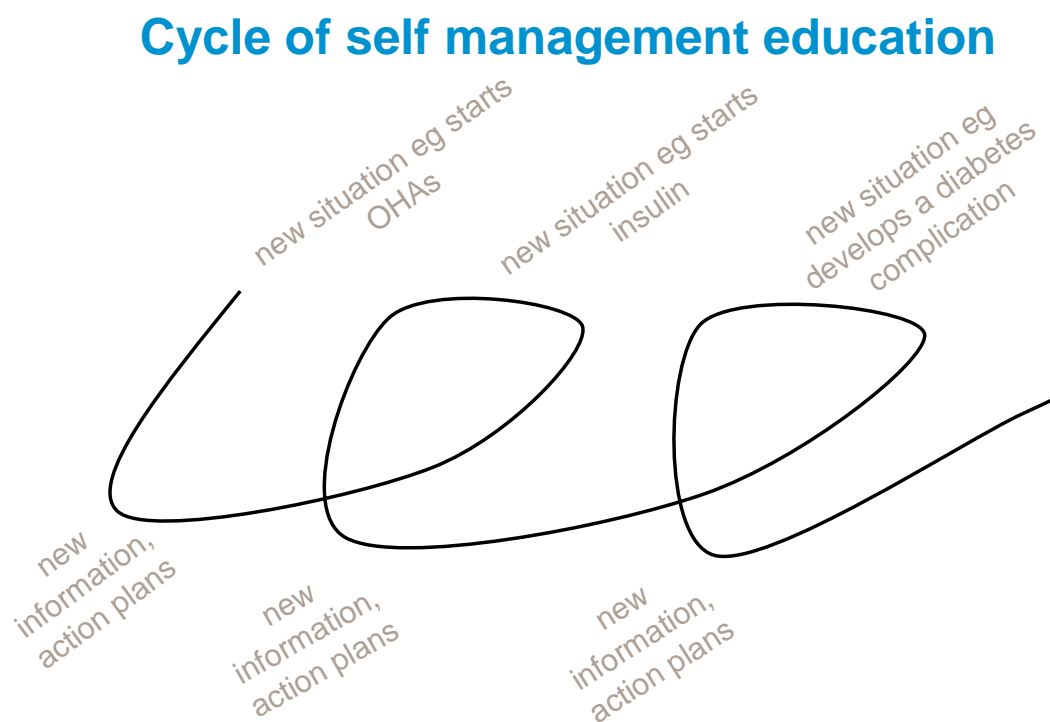
Clients need to actively engage in a conversation about their options for initial and ongoing diabetes education.

For many people a shared care approach to education and support can work well. This may mean that the diabetes educator provides the more specialised education and the practice nurse provides the ongoing reinforcement and support. Individualised action plans will assist this process.

It is important to communicate the varying roles to the person so they know why they are attending appointments and what to expect.

In general practice settings, recall systems such as the Medicare funded 'Cycle of Care' are integral to the successful management of people with diabetes who are being managed in primary care.

Figure 2



## **Assessing self care and education needs within a community or hospital setting**

Use the guiding points below to systematically assess if a person requires a referral for diabetes education and/or follow up from their local doctor or diabetes specialist.

- > Medications – ensure quality use of medicines eg do they understand time to administer, side effects, dose. Has there been a change in their medication regimen?
- > Self administration of insulin – check their technique, equipment, sharps disposal, dose, timing, storage and understanding.
- > Hypoglycaemia – are they at risk? If yes, check if they understand prevention, treatment and follow up, ensure they have an action plan.
- > Foot care – check when they last had a foot check, do they know if they have at risk feet, if at risk do they have a foot protection plan.
- > Sick days – do they have an action plan for sick days?
- > Nutrition – does the person understand their nutrition needs relevant to their type of diabetes eg carbohydrate counting. Is the person under or overweight?
- > Blood glucose monitoring– can the person demonstrate correct technique with their meter and/or describe the correct procedure. Are their blood glucose levels at target? Does the person know their target BGLs?
- > Diabetes complication – has there been a recent diagnosis of a diabetes complication?
- > Psychosocial – are there any psychological or social issues that are impacting on the person's diabetes management?

Once the practice nurse, community nurse or ward nurse has completed the assessment a plan can be negotiated including the arrangement of referrals to specialist health professionals. The assessment will identify how urgent the persons education needs are and whether any of the information can initially be provided by the staff member who completed the assessment.

## **Referral options for diabetes self management support**

- > diabetes educator
- > dietitian
- > or other relevant health professionals as deemed necessary, eg social worker, psychologist, podiatrist, vascular nurse, eye specialist, Aboriginal health worker.

When writing your referral ensure that you indicate the reason for referral and the urgency in which the person requires an appointment.

## Teaching tips

### Information to consider

- > The type of questions that the person asks can reflect their knowledge and understanding.
- > Accept the person's right not to follow any / all of the recommendations at the time of teaching. They may take these up later.
- > People have individual health beliefs and values which affect motivation to learn and change behaviours.
- > For some people, the need to avoid alcohol, cigarettes, fatty foods and excess calories conflicts with perceived rights for social acceptance, pleasure, gratification and tension reduction. Therefore, some people need help in substituting one value for another. A new value must be equally rewarding if the behaviour is to be changed.

For example:

- Not smelling of smoke when smoking is stopped.
  - Wearing new clothing after losing weight.
  - Feeling better when controlling blood glucose levels.
  - Being able to work better when exercising / reducing alcohol intake.
- > Use correct but simple terminology.

For example: 'glucose' is preferable to 'sugar'. People can then relate glucose not only to simple sugars but to carbohydrates as well.
  - > Having ascertained what people already know, work from that to new areas of information.
  - > Having ascertained what worries or concerns the person has, work to address these as a priority.
  - > Work from simple to more complex information

For example: teach the relationship between carbohydrates and blood glucose, before expecting people to plan a menu and count carbohydrates.
  - > Relate what is currently being taught to the learner's past experiences.

For example: 'How did you feel yesterday?' 'I felt weak, I was sweaty and unsteady on my feet'. 'Your BGL may have decreased, maybe you had a hypo, what might you do next time you feel this way'.
  - > Encourage active participation in the teaching session.

For example: ask the person to describe how they might explain an aspect of diabetes self care to a friend or relative.
  - > Demonstrate the entire skill first, then the person performs the skill with you and finally the person performs the skill independently with your support / supervision.
  - > Use written step by step information so that the person can refer to it at home.
  - > Printed text should be provided to reinforce information given and should be specific to the areas addressed. Ask the person to bring it to the next appointment to discuss any questions they may have about the content.
  - > Repetition and reinforcement of information will aid learning.

For example: Start each education session with a quick review of the key points or issues discussed at the last session and ask if they have any questions.

- > It is important to give positive feedback.

For example: say that they have done well to have retained information from a previous session. Commend further reading undertaken on diabetes. Reinforce the positive benefit of asking questions. This will give a sense of achievement, direction and control.

- > Use a variety of teaching methods.

For example: groups, one to one sessions, videos, drawings / diagrams, anatomy models, demonstration practice.

Use written handouts on subjects covered that will reinforce the information given or skills taught eg action plans.

## Assessing teaching effectiveness

- > Ask the person to recall information.

For example: 'Last appointment we talked about low blood glucose and we developed a 'Hypo action plan' for you? What do you remember about what you should do if your blood glucose went low while you were driving your car?'

- > Another method for evaluating outcomes can be through the client setting their own personal goals. Explain that goals focus on:

- *Actions* – not attitudes
- Something to do or *start doing* – not something to stop doing
- *One action* at a time
- Actions that individuals feel are *achievable* – even if they pose a bit of a challenge
- Actions that are *personally meaningful*

You can explain the **SMART** goal acronym, giving examples. Goals should be:

- **Specific** – exactly what will you do? eg I will walk for 30 minutes.
- **Measurable** – how much / how often are you going to do this? eg three times a week.
- **Achievable** – how confident are you that you can do this? On a scale of 1 – 10, confidence should be rated at least 7, otherwise the goal may be unattainable.
- **Realistic** – is this something that really can be done?
- **Time frame** – be specific about the time frame in which you are going to achieve this eg I will achieve this by the end of next week.

# Appendix 1

## Health behaviour and health education theory

Health behaviour and health education theories provide frameworks in which to consider why knowledge may not be translated into action, why people may or may not adhere to treatment recommendations and strategies that can be utilised to support behaviour change. The Outcomes and Indicators Framework identified self management and self determination as two outcome areas that were most impacted upon by diabetes education, after knowledge and understanding. The following theories provide insight into these concepts and practical strategies to achieve these outcomes.

The Health Belief Model<sup>7</sup> identifies that in order to adopt a behaviour (eg engage in self care practices), a person must believe they are at risk of an adverse event (eg diabetes complications), that the consequences of the event are severe and that the event can be avoided by a particular treatment or engaging in a particular behaviour. The likelihood of a person adopting the behaviour depends on how they perceive the benefits as opposed to the barriers (or costs) of adopting the behaviour.

Self Determination Theory<sup>8</sup> describes autonomous motivation versus controlled motivation – doing something because one wants to do it versus being coerced to do it (including health professional pressure or pressure to appease a health professional). Autonomous motivation is associated with greater likelihood of success in adopting and sustaining a behaviour and is associated with the absence of threats and external rewards. An autonomous environment offers choice and the opportunity to discuss and acknowledge feelings.

Self efficacy is one of the five domains of self determination identified in the Outcomes and Indicators Framework. Self efficacy is also one of the key constructs of Social Cognitive Theory.<sup>7</sup> People develop self efficacy through experiencing success. Social Cognitive Theory embodies the following strategies for health behaviour interventions:

- > providing opportunities for social support
- > promoting capability and mastery through skills training
- > modelling positive outcomes of healthy behaviours
- > describing outcomes of change that are meaningful to individuals
- > promoting individual regulation of goal directed behaviour through providing opportunities for decision making, self monitoring, goal setting, problem solving and intrinsic (self) reward
- > providing opportunities for observational learning and opportunities to learn from credible models (eg peers)
- > supporting self initiated rewards / incentives
- > approaching behaviour change in small steps and being specific about the change
- > providing training in problem solving and stress management, including the opportunity to practice skills in challenging situations.

The **Transtheoretical Model**<sup>7</sup> identifies the various stages of change that individuals move through in order to adopt and maintain a behaviour: pre-contemplation; contemplation; preparation; action; and maintenance. Other important concepts of the Transtheoretical Model are decisional balance (the benefits versus the costs of changing) and self efficacy (confidence that one can engage in healthy behaviours across a range of challenging situations versus temptation to engage in unhealthy behaviours). The Model also clearly identifies that different strategies are required for each 'stage of change' and applying strategies suitable for one stage, may be counterproductive at another stage. Given the range of self care behaviours that people with diabetes are required to contemplate, it is important to recognise that individuals may be at different stages of readiness for each one.



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