

Diabetes Self Care Program (7 steps to success)

Diabetes Outreach
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1.1 Background

Historically the Diabetes Information Program (DIP) was designed as an information intensive short course that aimed to provide practical diabetes information to people with type 2 diabetes. The first version of the DIP was developed in 1995 by the Diabetes Centre at the Queen Elizabeth Hospital and it has undergone regular updates since that time. It has also been used in some rural and metropolitan diabetes services in South Australia.

In 2008, Diabetes Outreach contracted Royal District Nursing Service to conduct a review of the DIP. Dr Debbie Kralik headed up the review process which consisted of consultations with consumers of the DIP, metropolitan and rural health professionals involved in the delivery of the DIP and a literature review to provide the context in which to consider the findings from these consultations.

Key recommendations from the review were:

- Revise the DIP with a focus on promoting self management knowledge and skills
- Encourage diabetes education that is consumer driven with DIP attendees placing their issues on the agenda for discussion
- Promote hands on learning experiences
- Place diabetes self management information in a healthy lifestyle and self care framework rather than imparting disease specific clinical information
- Develop a suite of packages on diabetes self management
- Strengthen the evaluation of the DIP.

In 2009 Diabetes Outreach contracted Kaye Neylon (Dietitian CDE) to develop in partnership with Diabetes Outreach an education program. The resulting Diabetes Self Care Program (DSCP) has drawn on these recommendations and other evidence based diabetes and chronic disease self management guidelines. The DSCP is based on the 'Diabetes self care – 7 steps to success' booklet which was developed by the Australian Diabetes Educators Association (ADEA) in 2008. We would like to acknowledge the previous work done by the American Association of Diabetes Educators (AADE) and the Australian Diabetes Educators Association (ADEA) in developing the 7 steps to success concept ¹.

Whilst the DSCP was initially designed as a group based program we encourage you to consider using the 7 steps framework ¹ and module content for individual education sessions wherever possible and appropriate.

1.2 Program philosophy and theoretical framework / underpinning evidence base

The impact of chronic disease and the growing awareness of the role played by people with chronic conditions in determining their own health outcomes have 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 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* ² and the *National Service Improvement Framework for Diabetes* ³.

Unlike acute medical conditions, chronic conditions 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 has been considered as 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 make the person with diabetes 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).¹⁴

The role of diabetes educators is to support people with diabetes along this path by providing self management education and support, enabling them to master the tasks required for effective self care and to become an active participant in their diabetes management.

There is now a wide body of literature on chronic disease self management and on diabetes self management education. The following models and frameworks have been drawn on to develop the design, delivery and evaluation of the DSCP.

1.2.1 Chronic Care Model

The Chronic Care Model ⁵ identifies the following elements that are necessary to achieve high quality chronic disease care.

- Health System – A culture of change that promotes safe, high quality care and re-orientation from an acute care to a chronic care service delivery model. Communication and data sharing between service providers to coordinate care as patients move between health care settings and providers.
- Delivery System Design – Delivery of pro-active, effective and efficient clinical care and self management support that patients understand and that fits with their cultural background and learning styles.
- Decision Support – Provision of evidence based clinical care that is shared with clients and the use of proven education methods.
- Clinical Information Systems – Use of information systems that provide timely reminders for patients and clinicians, identify clients needing additional care and monitor outcomes (e.g., diabetes register and recall systems).

- Self Management Support – Use of effective self management support strategies such as assessment, goal setting, action planning, problem solving and follow-up to empower clients and prepare them to manage their health and health care. Use of health service and community resources to provide ongoing self management support to clients.
- The Community – Partnerships with community organisations to support and fill gaps in needed services and facilitating client participation.

The Model asserts that if these elements are in place the result will be *'informed activated patients interacting with prepared and pro-active clinical teams'* and, ultimately, improved health outcomes.

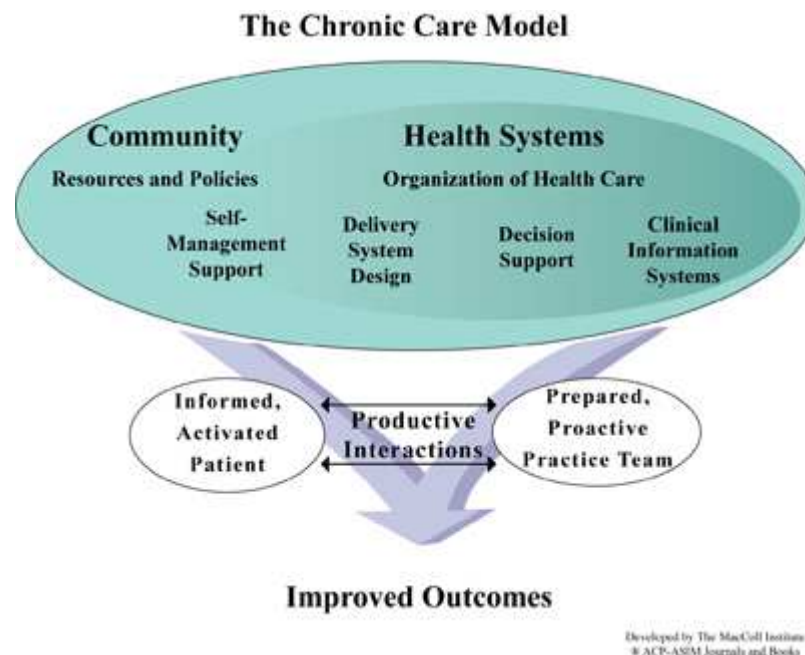


Figure 1: Wagner EH. Chronic disease management: what will it take to improve care for chronic illness? *Effective Clinical Practice*, Aug/Sept. 1998; 1:2-4

The Chronic Care Model, and the evidence base on which it has been developed, emphasises the client's central role in managing their own health and health care and that effective self management support involves much more than simply imparting information. Proven strategies are essential to provide emotional support and strategies for living with a chronic illness along with information on the condition.

The Improving Chronic Care website ⁶ provides a wealth of information on chronic disease care, self management support and the supporting evidence base for the model.

The Diabetes Self Care Program (DSCP) is:

- ***Based on health behaviour and education theory and evidence based clinical management guidelines.***
- ***Integrated with clinical care. Evidence based clinical management guidelines are discussed with participants in the DSCP to help them assess their individual risk factors and treatment and lifestyle options. With client consent, DSCP facilitators communicate with referring practitioners to obtain accurate and current referral information and report outcomes of their patient's participation in the DSCP. The DSCP identifies triggers for referral to other members of the diabetes care team. The DSCP acknowledges the general practitioner as the usual care coordinator for people with type 2 diabetes.***
- ***Acknowledges the client as the most important member of their diabetes team and uses evidence based strategies to support effective self management.***
- ***Makes links to other health service and community based programs to extend and enhance available support for effective self care.***

1.2.2 Goals and outcomes for diabetes education

The report *Outcomes and Indicators for Diabetes Education – A National Consensus Position* (Outcomes and Indicators Framework) ⁷ provides a framework for the design and evaluation of diabetes education programs. Three overarching goals for diabetes education were identified in this report that resulted from a review of relevant literature, survey of service providers, extensive consultation with consumers, service providers and policy makers and a national stakeholder forum:

- Optimal adjustment to living with diabetes
- Optimal physical (health) outcomes
- Optimal (public and personal) cost effectiveness.

The outcomes associated with the attainment of these goals were identified as:

- Knowledge / understanding (including the application of knowledge)
- Self management
- Self determination
- Psychological adjustment
- Clinical outcomes
- Cost effectiveness.

The above outcomes were defined as the results of diabetes education. Indicator areas were identified for each outcome. Indicators are defined in the Report as the units of information that can measure progress towards achievement of the result.

The *Final framework of goals, outcomes and indicator areas for diabetes education*, taken from the Outcomes and Indicators report 20007:44) identifies the outcomes in order of direct influence by diabetes education.

Diabetes education was deemed to have the greatest impact on diabetes knowledge, with self management, self determination and psychological adjustment as the outcomes next most impacted by diabetes education. While the difficulty of measuring (isolating) the impact of diabetes education on clinical outcomes and cost effectiveness was noted, the report identified the importance of cross linking these outcomes measures with other diabetes education outcome measures.

The DSCP is outcomes focused and uses evidence based strategies to achieve the goals and outcomes identified for diabetes education. In particular, self management, self determination and psychological adjustment, underpinned by knowledge and understanding, are key outcome areas determining the content and delivery of the DSCP.

Monitoring and evaluation of the DSCP is based on the identified diabetes education outcomes.

1.2.3 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 University⁸ and the Flinders Human Behaviour & Health Research Unit⁹ identify common tasks that a person needs to achieve in order to successfully manage a chronic condition.

Stanford University	Flinders Human Behaviour & Health Research Unit
<ul style="list-style-type: none"> ▪ 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 	<ul style="list-style-type: none"> ▪ 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 a task 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 well being. 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. The Stanford Model focuses on peer leadership and generic skill development while the Flinders Model is clinician led and is designed to be integrated with medical management.

The self management tasks identified by these authors are congruent with the self care behaviours identified in a technical review undertaken by American Association of Diabetes Educators (AADE) as being key behaviours for effective diabetes self management ⁴.

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 Self Care – the 7 Steps to Success* ¹.

The self care behaviours 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.

The seven core modules of the DSCP are structured around the seven self care behaviours. Self care behaviour, not information, is the primary focus of the DSCP.

1.2.4 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 utilized to support behaviour change.

The Outcomes and Indicators Framework identified self management and self determination as two outcome areas most impacted on 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** ¹⁰ identifies that in order to adopt a behaviour (e.g., engage in self care practices), a person must believe they are at risk of an adverse event (e.g., 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 ⁷ 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** ¹⁰. 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 (e.g., 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** ¹⁰ 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 at another may be counter productive. 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.

Individual care plans provide the basis for DSCP participants to assess their current self care behaviours. Care plans are discussed in the context of recommended targets, the relevance of the targets to diabetes health outcomes and treatment and lifestyle options to achieve the targets.

DSCP activities are designed to encourage self assessment and self reflection and to develop skills that can be used on an ongoing basis to monitor diabetes and self care needs.

DSCP participants are encouraged to build self efficacy through engaging in 'goal setting' assist with barrier identification and problem solving skills.

The group structure of the DSCP provides social support from peers as well as peer learning and modelling opportunities.

DSCP participants determine their own goals and their own pathway through the DSCP which offers a 'menu' of choices according to participant determined priorities. Having attended an introductory module, participants determine which of the seven self care modules they will attend.

1.2.5 Delivery of diabetes education

A Cochrane Review ¹¹ examining the impact of group training in diabetes self care concluded that group programs impacted favourably on a range of clinical diabetes outcomes.

The NHMRC Patient Education Guideline for Type 2 Diabetes ¹² identifies the following:

- Both group and one-to-one diabetes client education provided on a face to face basis have a positive impact on knowledge, lifestyle change and some aspects of psychological outcomes.
- Interventions delivered over the longer term and those with regular reinforcement are more effective than one-off or short term interventions.
- Multidisciplinary team delivery may provide better client outcomes.

The DSCP is designed to be conducted as a group education program with entry to the group program being the preferred pathway for clients with type 2 diabetes who meet eligibility criteria. Group programs offer opportunities for problem solving, peer learning and modelling as outlined above as well as service efficiencies with respect to providing DSME for people with type 2 diabetes.

Wherever possible, the DSCP should be delivered by a multidisciplinary team of health professionals with recognised skills and experience in diabetes education and care and all of whom are familiar with and committed to the goals and philosophy of the program.

The module outlines may also be used by diabetes educators as the framework for individual interventions.

1.3 Program aims

The overall aim of the DSCP is to support people with type 2 diabetes 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 of the DSCP are to:

- Enhance self efficacy
- Facilitate the adoption of self care behaviours
- Reduce diabetes related distress.

Module specific aims and learning outcomes are identified for each module of the DSCP.

1.4 Participant target group

People with type 2 diabetes who are:

- Over 18 years
- Able to speak, read and write English – diabetes educators should consider engaging interpreters to conduct the group programs where numbers warrant for non-English speaking clientele
- Able to participate effectively in a group education program – consider hearing, sight, general health and well being (including hyperglycaemic symptoms), existence of co-morbidities, cognitive abilities and mental health issues
- Significant family members or friends of participants.

It may be useful to telephone potential participants to ascertain suitability for group sessions.

1.5 Program facilitators

The DSCP should be conducted by qualified health professionals authorised to practice and who have recognised qualifications and experience in diabetes education and care. Credentialed Diabetes Educators[®], or health professional eligible for this credential and who have completed an ADEA accredited graduate certificate course in diabetes education and care, are the recommended facilitators. At a minimum, facilitators should be authorised health professionals who have completed the diabetes short course *Diabetes Management in the General Care Setting* (National Association of Diabetes Centres).

It is recommended that, wherever possible, the DSCP is facilitated by a multidisciplinary team. Where team delivery occurs, it is essential that all facilitators are familiar with and committed to the goals and philosophy of the DSCP, communicate with other team members regarding participant progress, participate in the evaluation of the DSCP and actively contribute to the continuous quality improvement of its delivery.

1.6 Conducting the program

The DSCP should be conducted within accepted standards of practice for diabetes educators. This includes ensuring appropriate documentation for each client entering the program including: written referrals; client consent forms; an individual client assessment; a record of the interventions they receive; the outcomes of the interventions; and communication with other practitioners.

Because the DSCP is conducted within a group environment, this does not negate the accepted standard of care whereby an individual assessment of participant's learning outcomes is conducted and acted upon.

The DSCP has been developed as a group program but can be used in one to one education sessions. Group programs have been demonstrated to be effective in improving diabetes outcomes (fasting blood glucose, HbA1c, diabetes knowledge, systolic blood pressure, body weight and the requirement for diabetes medication).¹¹

The recommended number of participants for a group is between three (3) people with diabetes and a maximum of twelve (12) people. Significant others should be encouraged to attend and where they do so, should be encouraged to participate actively in the group activities. DSCP module outlines and their associated tools may be used by diabetes educators to guide individual consultations.

The DSCP consists of:

- An introductory module
- Seven modules based on the seven self care behaviours; and

The DSCP focuses on the development of self care skills. The imparting of information is not the aim of the DSCP other than to provide the information necessary to facilitate the development of self care behaviours. Active engagement of the participants is an essential underpinning of the DSCP.

The DSCP is learner centred, meaning that the DSCP:

- Lets learners know why something is important to learn
- Shows learners how to direct themselves through the information
- Relates the topics to the learner's experiences
- Recognises that people will not learn until they are ready and motivated to learn
- Helps learners overcome inhibitions, behaviours, and beliefs about learning (changing behaviour).¹³

Learner centred approaches acknowledge the expertise of the learner and differ from didactic approaches where the teacher is the expert. It should be noted that employing a conversational style (question and answer) is not sufficient to achieve learner centred model of teaching/learning.

All modules make provision for an open 'burning issues' activity whereby participants identify questions they want answers to before they leave the session.

The intent of the modules is to activate participants by developing self awareness and developing self assessment and problem solving skills and mobilising those skills to adopt effective self care behaviours.

Introductory module

Participants deemed suitable for participation in the DSCP, based on an initial assessment (this can be made on the basis of information in a carefully constructed referral form or on the basis of a telephone interview), should attend the introductory module before attending other modules. The purpose of the introductory module is to:

- Provide a brief overview of diabetes
- Provide an opportunity for participants to explore feelings about living with a chronic condition
- Introduce the concept of diabetes self management within the context of overall diabetes care
- Introduce clients to the DSCP, including the challenge based philosophy
- Assist participants to understand their individual priorities through the use of a care plan
- Motivate participants to register for further modules
- Provide a further opportunity for the diabetes educator to assess client suitability for participation in a group program and their capacity for self care and make recommendations / arrangements for alternative services if required.

It is envisaged that the introductory module would need to be conducted on a regular basis to accommodate new referrals in a timely manner.

Self care behaviour modules

These seven modules are built around each of the self care behaviours:

- Healthy eating
- Being active
- Monitoring
- Taking medication
- Problem solving
- Healthy coping
- Reducing risks.

Based on their own priorities and readiness for change, clients choose which modules they want to attend and in what order.

Each of these modules starts with a recapitulation of participants care plan, explores how the particular behaviour impacts on various risk indicators and provides a range of activities for participants to assess their current behaviour. Participants are encouraged to take up the challenge of a self care 'goal' within a goal setting and problem solving context.

It is envisaged that each of the above modules would be conducted on a cyclical basis. Based on client demand, some modules may be conducted more frequently than other.

Each module includes:

- Indicators for referral to the referring practitioner or other health professionals
- A section for diabetes educators to complete that identifies local services (health service and community) that can support participants achieve goals or help facilitate self care behaviours.

Note: The 'Problem solving' module brings together the learning from other modules such as 'Healthy eating', 'Being active' and 'Monitoring'. Participants will gain the most benefit from this module if they have attended these other modules.

1.7 Evaluation

Evaluation can be formative or summative. Formative evaluation focuses on the processes of a program eg to find out if improvements or adjustments are needed to achieve the educational outcomes. Evaluating processes is a way of monitoring the implementation of the program. The summative evaluation is focused on assessing what outcomes have been achieved from the program eg long term effects of a program.

The first phase for evaluating this program will use a formative approach as this will inform further adjustments/improvements to the education program.

Formative evaluation

1. Service capacity measures
 - total occasions of service for DSCP
2. Service reach measures:
 - number of referrals to DSCP versus prevalence of type 2 diabetes for a given geographical area
 - number of referrals to DSCP of newly diagnosed type 2 diabetes versus incidence of type 2 diabetes for region
3. Efficiency measures:
 - number of people referred versus the number attending the introductory module
 - number people attending the introductory module versus numbers attending further modules (none, some, all)
 - number of people who actually attended versus number booked in
 - number referred to other health service providers
4. Surveys (for participants and the presenter)

These can be used at the end of each session to get a general feel for how the clients and the presenter felt after the session. Click on the link for an example of a *consumer satisfaction survey* and a *health professional survey*.

This framework can then guide discussion between the diabetes educator and the observer. A written summary about any 'action taken' is also recommended.

Summative evaluation (to be completed post formative evaluation stage)

The report *Outcomes and Indicators for Diabetes Education – A National Consensus Position* (Outcomes and Indicators Framework 2007) provides a framework for the design and evaluation of diabetes education programs. Some of the outcomes related to diabetes education from this report were identified as:

- Knowledge / understanding (including the application of knowledge)
- Self management
- Self determination
- Psychological adjustment
- Clinical outcomes

Some of the tools that can be used pre and post education to assess outcomes are listed below.

- Diabetes Knowledge Questionnaire
- Summary of Diabetes Self-Care Activities (SDSCA)
- Diabetes Empowerment Scale from the University of Michigan
- Problems Areas in Diabetes (PAID) questionnaire

If you would like access further information about these tools please contact Diabetes Outreach either via email or phone.

1.8 Marketing the DSCP to your managers, colleagues, community and general practice

Any new program requires planning and communication with key stakeholders. The success of a new group program such as the DSCP will be largely dependent on engaging key stakeholders so that they understand who could benefit and how they can be referred into the program. There is also a need to engage the local community so that they can make decisions about their own education pathway each step of the way.

We recommend the use of a *Community Education Flow Chart* as this can be used across a geographical area. The education pathway can be used by all health professionals as well as consumers. The flow chart clearly shows the cyclical nature of education and the person with diabetes can get a sense that diabetes education is a lifelong journey.

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