

Standard 3

People with diabetes should be offered, as a minimum, an annual assessment for the risk and presence of diabetes-related complications and for cardiovascular risk. They should participate in making their own care plans, and set agreed and documented goals/targets with their health care team.

Key practice points

- People with diabetes are at increased risk of microvascular and macrovascular complications and, therefore, should be offered assessment for risk and presence of complications.
- The risk of complications varies greatly across the diabetic population.
- Young people with type 2 diabetes have a high risk of morbidity and mortality.
- The aim is prevention of complications, especially targeting those at high risk.
- Patients with existing complications (eg, foot, eye, kidney or cardiovascular disease) are in a high-risk category and should be managed intensively.

Read this standard in conjunction with the equality and diversity section in the Introduction to the Toolkit.

What the quality statement means for each audience

Service providers ensure people with diabetes are offered, as a minimum, an annual assessment for the risk and presence of diabetes-related complications and for cardiovascular risk. In addition, people with diabetes should be enabled to participate in annual care planning with documented agreed goals and an action plan, and to support this, training is provided for health care professionals.

Health care professionals ensure they are competent to undertake support an annual assessment for the risk and presence of diabetes-related complications and for cardiovascular risk and practice in a way that enables people with diabetes to participate in their care, including agreeing on specific achievable goals and an action plan in annual care planning.

Funders and planners ensure services are commissioned that ensure people with diabetes have access to an annual assessment for the risk and presence of diabetes-related complications and for cardiovascular risk and delivered in a way that people with diabetes are encouraged to participate in their own care.

People with diabetes have access to an annual assessment for the risk and presence of diabetes-related complications and for cardiovascular risk, and are involved in annual planning for their own care, which includes agreeing on the best way to manage their diabetes and setting personal goals.

Definitions

Diabetes-related complications are a result of the damaging effects of hyperglycaemia that can be divided into macrovascular complications (coronary artery disease, peripheral arterial disease, and stroke) and microvascular complications (diabetic nephropathy, neuropathy, and retinopathy) (Fowler 2008).

Care planning is defined as a process that actively involves people in deciding, agreeing and sharing responsibility for how to manage their diabetes. It aims to help people with diabetes achieve optimal health by partnering with health care professionals to learn about, manage, and cope with diabetes and its related conditions in their daily lives.

Care planning is underpinned by the principles of patient-centredness and partnership. It is an ongoing process of communication, negotiation and joint decision-making in which both the person with diabetes and the health care professional(s) make an equal contribution to the consultation (Joint Department of Health and Diabetes UK Care Planning Working Group, 2006).



Introduction

Cardiovascular disease morbidity and mortality rates are two to five times higher in people with diabetes compared to people without diabetes. Women with diabetes have a higher relative risk of death from cardiovascular disease when compared to men with diabetes, however the absolute risk is lower. The excess mortality associated with diabetes is evident in all age groups but is particularly high in young people with type 1 diabetes (Scottish Intercollegiate Guidelines Network 2010). Young people with type 2 diabetes are at increased of greater mortality, more complications and unfavourable cardiovascular risk factors compared to young people with type 1 diabetes (Constantino et al 2013).

The traditional clinical consultation involves the gathering, sharing and discussing information, deciding the issues, and developing a plan. Care planning in addition involves encompassing the patient views and including a much wider range of issues across all aspects of a person's life. It takes into account their condition, and their personal goals are central to the action plans developed. In diabetes, care planning replaces the traditional annual review which can become a 'tick box' activity, with a 'conversation' that is more satisfactory and effective for everyone (Diabetes UK, NHS National Diabetes Support Team, Department of Health, and Health Foundation 2008).

When setting targets or goals, these should be specific to the individual, and set as part of the process of the care planning while assessing the clinical needs of the patient. The specific goals and expectations will differ significantly between a healthy 26-year-old and a frail 86-year-old with diabetes related complications (Chiang et al 2014).

People with diabetes are at increased risk of developing micro and macrovascular complications, plus poor glycaemic control and/or hypertension may impact on the advancement or management of co-morbidities or co-existing conditions. The New Zealand Primary Care Handbook (2012, p 49) states that an annual assessment for determining level of risk for macrovascular and microvascular complications is a key component of treatment planning and target setting for each individual with type 2 diabetes.

It notes that:

- the risk of complications varies greatly across the diabetic population
- the aim is prevention of complications, especially targeting those at high risk
- patients with existing complications (eg, foot, eye, kidney or cardiovascular disease) are in a high-risk category and should be managed intensively



Guidelines

In New Zealand, cardiovascular risk assessment is recommended annually for people with type 1 or type 2 diabetes from time of diagnosis, and includes a lipid profile, HbA1c, and blood pressure (Cardiovascular Disease Risk Assessment Steering Group 2013).

The **New Zealand Primary Care Handbook 2012** recommends people with existing diabetes should attend at least six-monthly for a review of HbA1c and blood pressure; annual review of lipids, ACR, eGFR and foot check; and two-yearly retinal screening (see Standards 4–6 and 9–11).

Psychological status

The **American Diabetes Association** and **Scottish Intercollegiate Guidelines Network** (SIGN) guidelines also recommend assessing psychological status annually and more often as needed, treating and referring to a mental health professional if indicated (Chiang et al 2014) (see Standard 4). In particular, the SIGN guidelines recommend a regular assessment of a broad range of psychological and behavioural problems in children and adults with type 1 diabetes. In children, this should include eating disorders, behavioural, emotional and family functioning problems. For adults, this should include anxiety, depression and eating disorders.

Children

The **Paediatric Society of New Zealand** and **Starship Foundation** (2013) recommends the following:

- **Retinal screening** – one- to two-yearly, beginning two years after diagnosis, in adolescents – one to two yearly, beginning five years after diagnosis or from age 9 years in children (see Standard 16).
- **Kidney health** – regular screening for protein in the urine (microalbuminuria) is recommended once a year, beginning two years after diagnosis, in adolescents – once a year, beginning five years after diagnosis or from age 9 years in children.
- **Vascular disease** – a young person with type 2 diabetes has an increased risk of complications at an earlier age.
- **Hypertension** – blood pressure should be checked at time of diagnosis and then every year.
- **Cholesterol or lipids** – every five years from time of diagnosis or from 12 years age then annually after puberty.

Care planning and goal/target setting

The National Institute for Health and Care Excellence guidelines (2010) recommend the following.

An individual care plan should be set up and reviewed annually, modified according to changes in wishes, circumstances and medical findings, and the details recorded. The plan should include aspects of:

- diabetes education including nutritional advice (see Standard 1)
- insulin therapy (see Standard 7)
- self-monitoring (see Standard 5)
- arterial risk factor surveillance and management (see Standards 5 and 6)
- late complications' surveillance and management (see Standards 9–12).

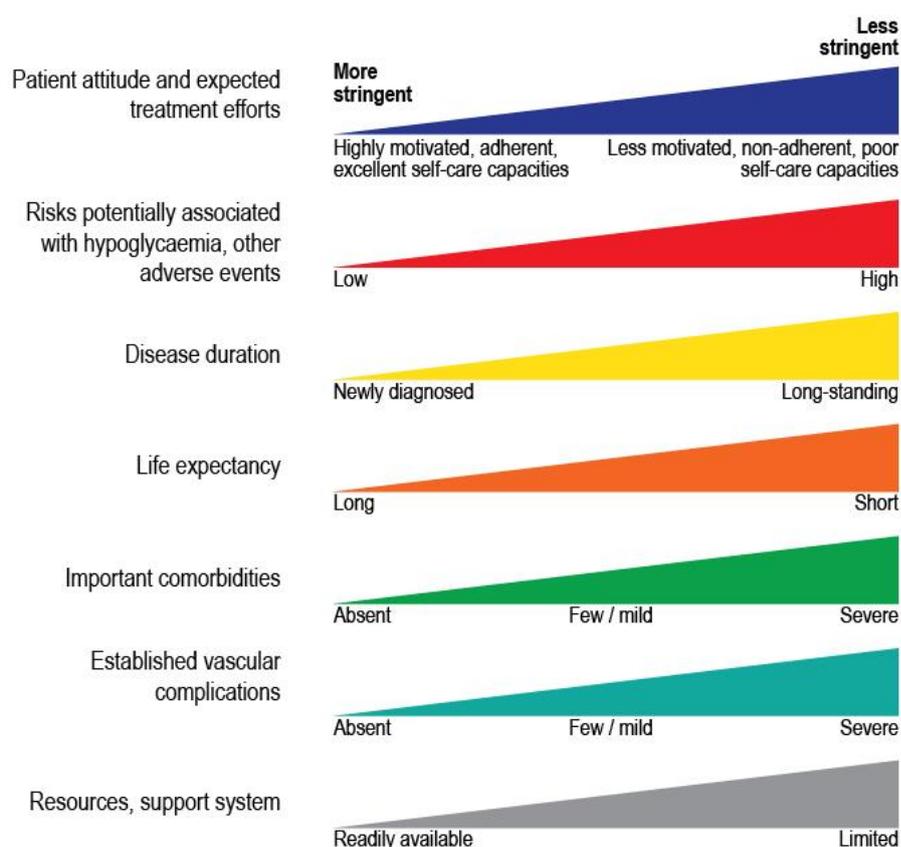
It is also recommended that population, practice-based and clinic diabetes registers be used to assist programmed recall for annual review and assessment of complications and vascular risk (NICE 2010).

The NZ Primary Care Handbook 2012 outlines the following:

- Approach to setting treatment targets:
 - setting treatment targets is an important component of diabetes management for all patients
 - targets given for specific parameters are based on best available evidence, but should be appropriate for the individual patient.
- Treatment targets to address risk factors:
 - targets should be appropriate for, and agreed with, the individual patient
 - treatment targets should be set for an individual in order to balance benefits with harms, in particular hypoglycaemia and weight gain
 - glycaemic control target: HbA1c 50–55 mmol/mol or as individually agreed
 - it is important to consider patient age. In younger people, tighter control should be considered given their higher lifetime risk of diabetes-related complications
 - any reduction in HbA1c is beneficial
 - good glycaemic control has a clear benefit on microvascular outcomes and if started early enough, on long term macrovascular outcomes
 - blood pressure (BP) target: <130/80 mm Hg. Evidence suggests a BP target <120 mm Hg may be harmful. Care should be taken to estimate likely treatment response for patients when BP approaches the target of <130 mm Hg
 - lipids target: triglycerides <1.7 mmol/L; total cholesterol <4.0 mmol/L.

Inzucchi et al (2012) provide the following guidance for managing hyperglycaemia, based on **American Diabetes Association** guidelines. They describe the figure as a 'depiction of the elements of decision-making used to determine appropriate efforts to achieve glycaemic targets. Greater concerns about a particular domain are represented by increasing height of the ramp. Thus, characteristics/predicaments toward the left justify more stringent efforts to lower HbA1c, whereas those toward the right are compatible with less stringent efforts. Where possible, such decisions should be made in conjunction with the patient, reflecting his or her preferences, needs, and values. This 'scale' is not designed to be applied rigidly but to be used as a broad construct to help guide clinical decisions' (p 1366).

Figure 2: Approach to management of hyperglycaemia



The **American Association of Clinical Endocrinologists** outlines the following in their guideline for developing a diabetes mellitus (DM) care plan: Every patient with documented DM requires a comprehensive care plan, which takes into account the individual's medical history, behaviours and risk factors, ethnic and cultural background, and environment. Glucose targets should take into account remaining life expectancy, duration since diagnosis, presence or absence of microvascular and macrovascular complications, cardiovascular risk factors, comorbid conditions and risk for severe hypoglycaemia.



Implementation advice

'People with diabetes are in charge of their own lives and self-management of their diabetes, and are the primary decision-makers about the actions they take in relation to their diabetes management' (Diabetes UK et al 2008, p 39).

Care planning consultations should be available to all people with diabetes and reflect the information needed, as well as both technical and emotional support to enable the person with diabetes to make the best decisions about their care (Diabetes UK et al 2008; NICE 2011). The person with diabetes is more likely to undertake action if it is related to decisions they have made, rather than decisions made for them (Diabetes UK et al, 2008).

People with diabetes need to be orientated to the care planning approach and what to expect. Health professional should undertake further training in developing patient-centred interventions if required (Scottish Intercollegiate Guidelines Network 2010). If the patient agrees, families and carers should have the opportunity to be involved in decisions about treatment and care and given the information and support they need (NICE 2009).

At each care planning consultation, time should be allowed to share information about issues and concerns, share results of biomedical tests, discuss the experience of living with diabetes and address needs to manage obesity, food and physical activity. The person with diabetes should receive help to access support and services, and, agree to a plan for managing diabetes that addresses the individual priorities and goals. These should be jointly agreed, including jointly setting a goal for HbA1c. Specific actions are in response to identified priorities that include an agreed timescale (Diabetes UK et al 2008; Joint Department of Health and Diabetes UK Care Planning Working Group 2006; NICE 2011).

This care planning approach will incorporate:

- nutritional advice
- discussing psychological wellbeing (identify support groups)
- managing obesity
- structured education
- screening for complications
- smoking cessation advice
- physical activity
- self-management programme
- agreeing goals for HbA1c
- agreeing plans for managing diabetes
- discussing goals
- follow-up support by telephone.

(Joint Department of Health and Diabetes UK Care Planning Working Group 2006.)

The documented individual care plan should be reviewed at least annually and modified according to any changes in wishes, clinical circumstance and medical findings (NICE 2004). In addition, diabetes registers should be established to support annual recall systems for surveillance of complications, cardiovascular risk, and for quality management (NICE 2004).

The shared treatment decisions should consider the individual's clinical state, age, comorbidities and frailty, personal preferences and available research evidence. The absolute benefits and harms of interventions must be considered, and it is acknowledged that people interpret these risks differently and will have their own inclinations and limits (Cardiovascular Disease Risk Assessment Steering Group 2013).

When setting a target HbA1c:

- involve the person in decisions about their individual HbA1c target level
- encourage the person to maintain their individual target, unless the resulting side-effects (including hypoglycaemia) or their efforts to achieve this impair their quality of life
- offer therapy (lifestyle and medication) to help achieve and maintain the HbA1c target level
- inform a person with a higher HbA1c that any reduction in HbA1c towards the agreed target is advantageous to future health
- avoid pursuing highly intensive management (NICE 2009).

A guide to implementing care planning in diabetes is available from Diabetes UK – www.diabetes.org.uk/documents/reports/careplanningdeco6.pdf (Joint Department of Health and Diabetes UK Care Planning Working Group 2006).



Implementation examples / innovations



The Year of Care (YOC) Programme (UK)

‘Working together for better health care and better self-care’

A section from the executive summary is below. Access to the full report is available here: www.diabetes.org.uk/upload/Professionals/Year%20of%20Care/YOC_Report.pdf.

The YOC Programme has demonstrated how to deliver personalised care in routine practice for people with long term conditions (LTCs), using diabetes as an exemplar. The approach puts people with LTCs firmly in the driving seat of their care and supports them to self-manage. It transforms the diabetes annual review into a constructive and meaningful dialogue between the health care professional and the person with diabetes. It has two components. Firstly, it enhances the routine biomedical surveillance and Quality and Outcomes Framework (QOF) review with a collaborative consultation, based on shared decision-making and self-management support, via care planning. Secondly, it ensures there is a choice of local services available to support people wanting to improve their health, wellbeing and health outcomes.

YOC provides practical evidence and support to implement the white paper *Equity and Excellence: Liberating the NHS* proposals for personalised care ‘no decision about me without me’ and locally-driven flexible commissioning for people with LTCs and the QIPP agenda. Care planning is included in the NICE Quality Standard for diabetes. YOC has worked closely with the Royal College of General Practitioners (RCGP), who are developing professional standards for care planning to be incorporated into training.

YOC makes available:

- a tested National Training and Support Programme to support delivery of care planning in primary and specialist care. This includes quality-assured ‘training the trainers’, facilitation of delivery, and links with unique IT templates to record patient goals, action plans and service needs
- the Royal College of General Practitioners’ (RCGP) report ‘Care Planning – Improving the Lives of People with Long Term Conditions’. This is a practical guide for clinical teams on putting the YOC care planning model into practice (Diabetes UK, NHS National Diabetes Support Team, Department of Health, and Health Foundation 2011).



Introducing personalised care planning into Newham: outcomes of a pilot project (Walker et al 2012)

This study explored the feasibility and acceptability of implementing a personalised care planning approach for diabetes care in general practice. A four-stage care planning process was introduced for diabetes annual review, involving patients (1) being made aware of the new process, (2) attending an appointment to gather clinical data, (3) receiving and reviewing their results, and (4) attending a care planning consultation. The latter is a collaborative discussion with the health professional about their response to their results, their goals and desired action plan. Health professionals received specialist training in personalised care planning, including practice observations and feedback. Introducing personalised care planning to general practice diabetes care was found to be possible and well received. The model for implementation of personalised care planning, which included specialty training for practice teams and ongoing support from local colleagues and health organisations, can help to meet national recommendations for the provision of personalised care plans for people with long-term

conditions. When implementing personalised care planning, efficient administration is vital, and behaviour change is necessary for both staff and patients.



Episode of Care programme

A new approach for managing diabetes in an integrated health care system in the USA is highly successful in improving the access to essential education about the management of this chronic condition and quality of diabetes care, in general. The programme was comprehensive and involved both patients and providers. It consisted of practice guidelines, medical screening, provider reports, diabetes education, focused clinic visits, easy access to care and reminder systems. Results indicated significant improvements in preventive screening, improved access to diabetes education, and lowering of HbA1c values (Friedman et al 1998).



Diabetes management in a health maintenance organisation (HMO)

Kaiser Permanente (Pleasanton, CA, USA), a large HMO in the USA, is using a population-based approach to improve outcomes for its 13,000 patients with diabetes. This innovative programme assists primary care teams to improve the delivery of diabetes care. Based on an integrated chronic care model, the programme includes an on-line registry of patients, evidence-based guidelines for routine diabetes care, improved support for patient self-management, and practice re-design that incorporates group visits. Results evidence improvements in the following areas:

- retinal screening rates increased from 56% to 70%
- renal screening rates increased from 18% to 68%
- foot exam rates increased from 18% to 82%
- HbA1c testing rates increased from 72% to 92%.

Synopsis: An evaluation of the effectiveness of a cluster visit model led by a diabetes nurse specialist for delivering outpatient care management to adult patients with poorly controlled diabetes aged 16–75 years who had either poor glycaemic control (HbA1c >69 mmol/mol) or no HbA1c test performed during the previous year. Intervention subjects received multidisciplinary outpatient diabetes care management delivered by a diabetes nurse specialist, a psychologist, a nutritionist, and a pharmacist in cluster visit settings of 10–18 patients/month for six months. This six-month cluster visit group model of care for adults with diabetes improved glycaemic control, self-efficacy, and patient satisfaction and resulted in a reduction in health care utilisation after the programme (Sadur et al 1999).



Assessment tools

Care planning

Structure

Evidence of local arrangements and provision of resources to ensure that people with diabetes participate in annual care planning that leads to documented agreed goals and an action plan.

Process

- (a) The proportion of people with diabetes who are offered annual care planning including documenting and agreeing goals and an action plan within the past year.

Numerator	The number of people in the denominator offered annual care planning including documenting and agreeing goals and an action plan within the past year
Denominator	The number of people with diabetes

- (b) The proportion of people with diabetes who participate in annual care planning including documenting and agreeing goals and an action plan within the past year.

Numerator	The number of people in the denominator participating in annual care planning including documenting and agreeing goals and an action plan within the past year
Denominator	The number of people with diabetes

Outcome

Patient satisfaction with diabetes care using validated patient survey criteria.

Setting goals/targets

Structure

Evidence of local arrangements to ensure that people with diabetes are able to agree with their health care professional on a documented personalised HbA1c target, and receive an ongoing review of treatment to minimise hypoglycaemia.

Process

- (a) The proportion of people with diabetes with a measured HbA1c within the past year.

Numerator	The number of people in the denominator with a measured HbA1c within the past year
Denominator	The number of people with diabetes

- (b) The proportion of people with diabetes who have an agreed target for HbA1c within the past year.

Numerator	The number of people in the denominator with an agreed target for HbA1c including a recently documented HbA1c within the past year
Denominator	The number of people with diabetes

- (c) The proportion of people with diabetes who have received a review of treatment to minimise hypoglycaemia in the previous 12 months.

Numerator	The number of people in the denominator receiving a review of treatment to minimise hypoglycaemia in the previous 12 months
Denominator	The number of people with diabetes

- (d) (Optional) The proportion of people with diabetes achieving their HbA1c target within the past year.

Numerator	The number of people in the denominator achieving their HbA1c target within the past year
Denominator	The number of people with diabetes

The proportion of people with diabetes with a documented HbA1c meeting agreed target within the past year.

Numerator	The number of people in the denominator with a documented HbA1c meeting agreed target
Denominator	The number of people with diabetes

Additional process measures:

- The percentage of patients with diabetes with a record of the presence or absence of peripheral pulses in the previous 15 months (see Standard 11).
- The percentage of patients with diabetes with a record of neuropathy testing in the previous 15 months (see Standard 11).
- The percentage of patients with diabetes who have a record of micro-albuminuria testing in the previous 15 months (see Standard 10).
- The percentage of patients with diabetes who have a record of retinal screening in the previous 15 months (see Standard 9).
- The percentage of patients with diabetes who have a record of estimated glomerular filtration rate in the previous 15 months (see Standard 9).



Resources

- **Cardiovascular disease (CVD) risk assessment calculator**
Online CVD risk assessment calculator. Hosted by NZSSD.
www.nzssd.org.nz/cvd/
- **Best Practice Advocacy Centre**
Clinical audit: Following up people with diabetes.
www.bpac.org.nz/Audits/docs/bpacnz_audit_diabetes_followup.pdf
- **Diabetes Resource Hub – NZ Health Improvement and Innovation Resource Centre**
www.hiirc.org.nz/page/41175/
- **Quality improvement in New Zealand health care**
Part 6: keeping the patient front and centre to improve health care quality
<http://journal.nzma.org.nz/journal/119-1242/2174/>

- **Michigan Diabetes Research and Training Centre**
Patient Care Handouts
www.med.umich.edu/mdrtc/profs/pt_handouts.html
- **Diabetes UK**
Contains information on what care planning is for the consumer (YouTube video).
www.diabetes.org.uk/Guide-to-diabetes/Monitoring/Interactions-with-healthcare-professionals/
- **Kidshealth.org.nz**
Information about children's health for New Zealand parents, caregivers, family and whānau
www.kidshealth.org.nz/#sthash.WqAoQKyH.dpuf
- **Health Mentor Online**
Information about diabetes for health care professionals
<http://pro.healthmentoronline.com/>
- **Information for people with diabetes**
www.healthmentoronline.com
- **Diabetes New Zealand**
Information about diabetes for people with diabetes
www.diabetes.org.nz



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