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NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

INDICATOR DEVELOPMENT PROGRAMME

Briefing paper

Topic area: Diabetes

Potential output: Recommendation for indicator development

Date of Indicator Advisory Committee meeting: 1 & 2 June 2015

Contents

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Executive summary

This paper presents an assessment of draft and updated NICE clinical guidelines for diabetes in the context of existing QOF and NICE menu indicators for diabetes. Based on this assessment a number of areas have been identified requiring Committee consideration.

The areas that require consideration by the Committee include:

- the current register indicator for people with type 1 and type 2 diabetes
- HbA1c targets for adults with type 1 and type 2 diabetes
- cholesterol management for adults with type 1 and type 2 diabetes
- blood pressure management for adults with type 1 and type 2 diabetes
- current indicators for measuring diabetes care

Diabetes register

Recommendations in draft updated NICE guidance highlight differences in the treatment and management of adults with type 1 and type 2 diabetes in certain areas of care. Currently, the diabetes register DM017[1] includes people with type 1 and type 2 diabetes and as such indicators do not differentiate between diabetes type in the care they measure.

The Committee is asked to consider:

- whether separate registers for people with diabetes should be developed to include i) people with type 1 diabetes ii) people with other types of diabetes including type 2.

HbA1c targets

Recommendations for HbA1c targets have been updated in draft guidance for adults with type 1 and type 2 diabetes.

[1] DM017. The contractor establishes and maintains a register of all patients aged 17 or over with diabetes mellitus, which specifies the type of diabetes where a diagnosis has been confirmed

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For type 1 diabetes: Current NICE guidance (CG15) recommends HbA1c is maintained below 58 mmol/mol to minimise risk of developing long term vascular complications. Draft updated guidance recommends maintaining a target of 48 mmol/mol or lower, but recommends agreeing individualised HbA1c targets taking into account lifestyle and other factors.

For type 2 diabetes: Current NICE guidance (CG87) recommends individualised HbA1c targets but sets a target for the general population of 48 mmol/mol. Draft updated guidance maintain these recommendations but recommends that drug treatment should be intensified where levels rise to 58 mmol/mol or higher and setting a target of 53 mmol/mol.

Current indicators for HbA1c set out three targets to improve glycaemic control across a distribution of HbA1c values - 59, 64 and 75 mmol/mol, to acknowledge that lower levels may not be achievable or appropriate for all people.

The Committee is asked to consider:

- whether the targets outlined in the current indicators should be amended/tightened in light of the draft updated recommendations
- whether separate indicators should be developed to address HbA1c in people with type 1 and type 2 diabetes

Cholesterol management

Recommendations for statin therapy/cholesterol management for diabetes have been replaced by the NICE guideline for lipid modification (CG181).

For type 1 diabetes: NICE recommends statin therapy is considered in all adults and offered to particular subsets e.g. those aged 40 and over or who have had diabetes for 10 years or more.

For type 2 diabetes: NICE recommends statin therapy in people at a 10% or greater 10-year risk of developing CVD assessed using QRISK2.

The current QOF indicator for cholesterol management (DM004) reflects previous NICE guidance which recommended an audit target of 5.0mmol/l for the secondary

prevention of CVD. Audit targets for cholesterol management are no longer recommended by NICE. This indicator is therefore no longer in line with current guidance.

The Committee is asked to:

- recommend DM04 for retirement
- reflect on discussions under item 10 to consider whether cholesterol management has been adequately addressed for people with type 2 diabetes
- consider the need to pilot and develop indicators to address statin therapy/cholesterol management in people with type 1 diabetes

Blood pressure management

Recommendations for blood pressure management have not been updated in the draft NICE guidelines for type 1 and type 2 diabetes in adults.

For type 1 diabetes: NICE guidance recommends treatment to a target of 135/85 mmHg or 130/80 mmHg if there is an abnormal albumin excretion rate or two or more features of the metabolic syndrome.

For type 2 diabetes: NICE guidance recommends treatment to a target of below 140/80 mmHg or below 130/80 mmHg if there is kidney, eye or cerebrovascular damage.

Current QOF indicators adopt staged targets for blood pressure management (140/80mmHg and 150/90mmHg). The 140/80 mmHg target is recommended by NICE for people with type 2 diabetes while the target of 150/90 mmHg has been set for people who cannot manage this.

The Committee is asked to consider:

- whether current indicators should be amended/tightened in light of the draft updated recommendations or if these remain appropriate
- whether separate indicators should be developed to address blood pressure in people with type 1 and type 2 diabetes

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Current indicators for measuring diabetes care

Appendix A of this paper presents a full assessment of current QOF and NICE menu indicators for diabetes against the updated and draft recommendations.

The Committee is asked to:

- review this impact assessment and outline any areas not identified above which may require further consideration and/or piloting and development

N.B. This piece of work aims to focus on outlining current indicators which may need updating in light of draft updated guidance for diabetes in time for indicator piloting.

It is anticipated that new areas for indicator development will be considered at the September 2015 Indicator Advisory Committee meeting following publication of diabetes guidance currently in development.

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Introduction

It is anticipated that by September 2015 NICE will have published a full suite of updated diabetes guidelines including:

Preventing type 2 diabetes (July 2012)

Diabetes in Pregnancy (February 2015)

Diabetic foot problems (due to publish in July 2015)

Diabetes in Children (Type 1 and 2) (due to publish in August 2015)

Type 1 diabetes in adults (due to publish in August 2015)

Type 2 diabetes in adults (due to publish in August 2015)

This represents a unique opportunity for the Committee to consider measuring diabetes care across the complete pathway, including prevention. It is anticipated that new areas for indicator development will be considered at the September 2015 Indicator Advisory Committee meeting following publication of guidance currently in development.

In advance of the September 2015 meeting the Committee is asked to review current indicators developed by the previous Quality and Outcome Framework (QOF) and Clinical Commissioning Group Outcomes Indicator Set (CCG OIS) Committees in Appendix A. Areas for specific consideration have been outlined in the main body of this paper and include the impact of draft updated recommendations on current indicators for HbA1c, cholesterol and blood pressure in adults with diabetes.

In light of discussions relating to these indicators the Committee is also being asked to consider how best to measure diabetes care using indicators going forward noting that different clinical management may (or may not) exist for type 1 and type 2 diabetes (and for adults and children) and therefore separate indicators for type 1 and type 2 may be more suitable for measurement purposes.

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Overview of Diabetes

Definitions

Diabetes is a chronic metabolic disorder caused by defects in insulin secretion and action. There are two major types of diabetes - type 1 and type 2. In type 1 diabetes the insulin producing cells of the pancreas have been destroyed by the body's immune system and this typically develops in children and young adults and requires management for the rest of each person's life. In type 2 diabetes, insulin is produced but is insufficient for the body's needs. There is also a degree of insulin resistance, where the cells in the body are not able to respond to the insulin that is produced. Other types of diabetes also exist including maturity onset diabetes of the young (MODY), gestational diabetes and neonatal diabetes.

Incidence, prevalence and evidence of variation by age, sex and ethnicity

Type 2 diabetes is more commonly diagnosed in adults over the age of 40 years, but is increasing in young people. Type 2 diabetes accounts for around 90% of all diabetes and the rates of type 2 diabetes are rising annually. The prevalence of diabetes is higher in men (7%) than in women (4.9%) and has increased significantly in recent years. Between 1994 and 2011 prevalence has increased from 2.9% to 7.0% in men and 1.9% to 4.9% in women - a pattern seen in almost all age groups.

The prevalence of diabetes varies with factors such as mix of ethnic groups and degree of social deprivation. Health states such as obesity present a risk factor for type 2 diabetes. People from minority ethnic communities have up to a 6 times higher than average risk of developing diabetes and the incidence and prevalence of diabetes is greater in areas of higher deprivation.

The Confidential Enquiry into Maternal and Child Health suggests that women from ethnic minority groups are more likely to develop gestational diabetes and are less likely to have a measure of long-term glycaemic control in the 6 months before pregnancy (Confidential Enquiry into Maternal and Child Health, 2005). A higher proportion of women with type 2 diabetes have been shown to be of black, Asian or other ethnic minority origin compared to women with type 1 diabetes (48.5% versus 8.5%).

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Morbidity and mortality

In Type 2 diabetes, which is preventable in two thirds of people who have it, life expectancy is reduced by up to 10 years. Most of the morbidity and increased mortality comes from coronary, cerebral and peripheral arterial disease. Mortality attributed to people with diabetes is suggested as 4.2% of deaths in men and 7.7% of deaths in women in the UK, although the burden is likely to be greater since diabetes is strongly linked to coronary heart disease.

Adverse pregnancy outcomes can occur in women with both type 1 and type 2 diabetes. This may be due to social and lifestyle factors or the adverse effects from some medication used to treat diabetic complications. Women with type 1 and type 2 diabetes are at increased risk of losing a baby during pregnancy, perinatal mortality and fetal congenital abnormality.

Impact on health services

Primary care

People with diabetes form a significant part of the general practice workload. The reported 2013/14 QOF prevalence for diabetes is 6.2% in England.

Diabetes UK estimates that treating diabetes and its complications costs the NHS £14 billion per year accounting for 10% of all NHS spending in England and Wales. Prescriptions to manage diabetes in primary care are estimated to cost the NHS £2.2 million on average every day.

Secondary care

Although type 2 diabetes is primarily managed in primary care it is common for people with Type 2 diabetes to experience related complications and people with diabetes are admitted to hospital for both elective and emergency care. Many people with type 1 diabetes attend secondary care clinics for their diabetes. National audit data shows that of inpatients with diabetes, 9% in England and 11% in Wales are admitted specifically for their diabetes. Data also suggests that people with diabetes are more likely to be admitted as an emergency compared to the general population

and that people with diabetes stay in hospital longer regardless of cause of admission.

Current management

Primary care plays a crucial role in managing diabetes and people diagnosed with diabetes are recorded on general practices' QOF diabetes registers. Much of the management and monitoring of patients with Type 2 diabetes is undertaken by general practitioners and members of the primary care team. These include encouraging a healthy lifestyle, modifying levels of blood pressure and lipids, and lowering blood glucose in order to reduce the risk of complications. GPs may also advise about contraception and the interaction between drugs for women with diabetes considering pregnancy.

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Discussion

1. Diabetes register

The current register for diabetes includes people aged 17 and with diabetes:

Indicator DM017: The contractor establishes and maintains a register of all patients aged 17 or over with diabetes mellitus, which specifies the type of diabetes where a diagnosis has been confirmed

For some areas of care there are differences in the management of type 1 and type 2 diabetes, for example in the targets set for blood pressure management as discussed in section 4 of this briefing paper:

Recommendations for adults with type 1 diabetes

1.13.8: Intervention levels for recommending blood pressure management should be 135/85 mmHg unless the person with type 1 diabetes has abnormal albumin excretion rate or two or more features of the metabolic syndrome in which case it should be 130/80 mmHg. [2004]

Recommendations for adults with type 2 diabetes

1.4.4 Provide lifestyle advice if blood pressure is confirmed as being consistently above 140/80 mmHg (or above 130/80 mmHg if there is kidney, eye or cerebrovascular damage). [2009]

Rationale

Currently, diabetes care is measured in people included on the 'diabetes register'. A greater understanding and knowledge of the complexities of diabetes has led to increasing difficulty in accurately diagnosing or classifying the type of diabetes.

Before 2011 the diabetes register required that practitioners coded patients with type 1 or type 2 diabetes in order to be added to the register. In March 2011, a report by the Royal College of General Practitioners (RCGP) and NHS Diabetes was published which examined the issue of coding, classification and diagnosing diabetes. In line with this report the QOF diabetes register was amended in 2012/13 to include all types of diabetes within the proposed algorithm (excluding gestational

diabetes). As such, the current register allows for practices to use the parent term 'diabetes mellitus' where a specific diagnosis is uncertain. Currently therefore there is an accepted trade-off between accuracy of diagnosis and completeness in order to achieve a single register for diabetes.

NICE guidelines recognise that type 1 and type 2 diabetes are clinically different conditions and recommendations describe differences in treatment and management. As such there may be clinical value in separating out these types of diabetes in order for care to be tailored to the specific clinical needs of each group.

Key Considerations

- Should there be two separate registers for people with diabetes categorised as i) people with type 1 diabetes ii) people with all other types of diabetes including type 2

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2. HbA1c targets for adults with type 1 and type 2 diabetes

Current indicators for HbA1c set out three targets to improve glycaemic control for people with type 1 and type 2 diabetes:

Indicator DM007: The percentage of patients with diabetes, on the register, in whom the last IFCC-HbA1c is 59 mmol/mol or less in the preceding 12 months

Indicator DM008 The percentage of patients with diabetes, on the register, in whom the last IFCC-HbA1c is 64 mmol/mol or less in the preceding 12 months

Indicator DM009. The percentage of patients with diabetes, on the register, in whom the last IFCC-HbA1c is 75 mmol/mol or less in the preceding 12 months

Recommendations for adults with type 1 diabetes

1.6.1: Measure HbA1c levels every 3–6 months in adults with type 1 diabetes [new 2015]

1.6.6: Support adults with type 1 diabetes to achieve and maintain a target HbA1c level of 48 mmol/mol (6.5%) or lower, to minimise the risk of long-term vascular complications [new 2015]

1.6.7: Agree an individualised HbA1c target with each adult with type 1 diabetes, taking into account factors such as the person's daily activities, aspirations, likelihood of complications, comorbidities, occupation and history of hypoglycaemia [new 2015]

1.6.8: Ensure that achieving, or attempting to achieve, an HbA1c target is not accompanied by problematic hypoglycaemia [new 2015]

1.6.9: Diabetes services should document the proportion of adults with type 1 diabetes in a service who achieve an HbA1c level of 53 mmol/mol (7%) or lower [new 2015]

Recommendations for adults with type 2 diabetes

1.6.5: Involve adults with type 2 diabetes in decisions about their individual HbA1c target. Encourage them to achieve the target and maintain it unless any resulting

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adverse effects (including hypoglycaemia), or their efforts to achieve their target, impair their quality of life. [new 2015]

1.6.7: Set a target HbA1c level of 48 mmol/mol (6.5%) for most adults with type 2 diabetes that is managed either by lifestyle and diet, or by lifestyle and diet in combination with a single drug that is not associated with hypoglycaemia. [new 2015]

1.6.8: If HbA1c levels rise to 58 mmol/mol (7.5%) or higher, intensify drug treatment, set a target HbA1c level of 53 mmol/mol (7.0%), and reinforce advice about diet, lifestyle and adherence to drug treatment. See section 1.3. For more information about supporting adherence, see the NICE guideline on medicines adherence. [new 2015]

1.6.9: Consider relaxing the target HbA1c level (see recommendations 1.6.7 and 1.6.8) on a case-by-case basis for adults with type 2 diabetes:

- *who are unlikely to achieve longer-term risk-reduction benefits (for example, people with a reduced life expectancy)*
- *for whom tight glycaemic control poses risks*
- *with a high risk of the consequences of hypoglycaemia (for example, people who are at risk of falling, people who have impaired awareness of hypoglycaemia, and people who drive or operate machinery as part of their job)*
- *for whom intensive management would not be appropriate (for example, people taking multiple drugs and people with significant comorbidities).*

These factors will need particular consideration for people who are older and frail. [new 2015]

1.6.10: If adults with type 2 diabetes achieve an HbA1c level that is lower than their target and they are not experiencing hypoglycaemia, encourage them to maintain it. [new 2015]

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1.6.11: For guidance on HbA1c targets for women who are pregnant or planning to become pregnant, see the NICE guideline on diabetes in pregnancy. [new 2015]

Rationale

The current indicator targets (59, 64, 75mmol/mol) have been selected following previous QOF Committee discussions taking into consideration the risks of adopting an aggressive treatment strategy for all people with diabetes and what is reasonable and safe for incentivisation in order to reduce the risk of vascular disease.

For type 1 diabetes: The draft updated guideline recommends that individual HbA1c targets are agreed with people but that this should usually be 48 mmol/mol. An audit target of 53 mmol/mol is recommended.

For type 2 diabetes: The draft updated guideline again recommends that individual HbA1c targets are agreed with people but that this should be 48 mmol/mol in most people. The guideline highlights intervention and action where HbA1c levels are ≥58 mmol/mol.

Key Considerations

- Should there be an HbA1c target specified in indicators which outlines a level of 53 mmol/mol (7%) or lower in light that
    - Draft updated guidance for people with type 1 diabetes recommend diabetes services should document the proportion of adults who achieve an HbA1c level of 53 mmol/mol (7%) or lower
    - Draft updated guidance for people with type 2 diabetes recommend drug treatment should be intensified and a target of 53 mmol/mol (7.0%) set where HbA1c levels rise to 58 mmol/mol (7.5%) or higher
- How can indicators make clear that where HbA1c levels rise to 58 mmol/mol (7.5%) or higher drug treatment should be intensified and a target of 53 mmol/mol (7.0%) set.

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3. Cholesterol management for adults with type 1 and type 2 diabetes

The current indicator for diabetes focuses on initiation and titration of statin therapy to reduce total cholesterol to ≤5 mmol/l in people with type 1 and type 2 diabetes:

Indicator DM004: The percentage of patients with diabetes, on the register, whose last measured total cholesterol (measured in the preceding 12 months) is 5mmol/l or less

Recommendations for adults with type 1 diabetes

1.3.23: Consider statin treatment for the primary prevention of CVD in all adults with type 1 diabetes. [new 2014]

1.3.24: Offer statin treatment for the primary prevention of CVD to adults with type 1 diabetes who:

- *are older than 40 years or*
- *have had diabetes for more than 10 years or*
- *have established nephropathy or*
- *have other CVD risk factors. [new 2014]*

1.3.25: Start treatment for adults with type 1 diabetes with atorvastatin 20 mg. [new 2014]

Recommendations for adults with type 2 diabetes

1.3.26: Offer atorvastatin 20 mg for the primary prevention of CVD to people with type 2 diabetes who have a 10% or greater 10-year risk of developing CVD. Estimate the level of risk using the QRISK2 assessment tool. [new 2014]

Rationale:

Current indicator DM004 exists in reflection of previous recommendations from CG87 on type 2 diabetes around targeting cholesterol to 5 mm/mol. These recommendations have now been replaced and updated by the NICE guidance for

lipid modification (CG181). For people with diabetes statin treatment is now recommended in the context of primary prevention of CVD rather than secondary prevention.

For type 1 diabetes: Draft updated NICE guidance recommends that statin therapy is considered in all people and offered to those with additional risk factors e.g. nephropathy.

For type 2 diabetes: Item 10 on lipid modification will consider the need for indicators around CVD risk assessment and subsequent statin therapy.

Key Considerations

- DM004 should be retired in light that the use of an audit target for cholesterol monitoring is no longer recommended
- Should indicators be developed to address statin therapy/cholesterol management in people with type 1 diabetes?

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4. Blood pressure management for adults with type 1 and type 2 diabetes

Indicator DM002/NM01: The percentage of patients with diabetes, on the register, in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less

Indicator DM003/NM02: The percentage of patients with diabetes, on the register, in whom the last blood pressure reading (measured in the preceding 12 months) is 140/80 mmHg or less

Recommendations for adults with type 1 diabetes

1.13.8: Intervention levels for recommending blood pressure management should be 135/85 mmHg unless the person with type 1 diabetes has abnormal albumin excretion rate or two or more features of the metabolic syndrome in which case it should be 130/80 mmHg. [2004]

Recommendations for adults with type 2 diabetes

1.4.4 Provide lifestyle advice (see section 1.3 and the lifestyle interventions section in 'Hypertension' [NICE clinical guideline 127]) if blood pressure is confirmed as being consistently above 140/80 mmHg (or above 130/80 mmHg if there is kidney, eye or cerebrovascular damage). [2009]

Rationale

Current indicator DM003/NM02 sets a target of 140/80 mmHg as per the target recommended by NICE for people with type 2 diabetes, whilst DM002/NM01 sets a target of 150/90 mmHg for those people who cannot manage this, such as those with retinopathy, micro-albuminuria or cerebrovascular disease. Setting a blood pressure target at a higher level, but expecting most patients to have blood pressure below this, is intended to encourage practitioners to address the needs of the minority of people whose blood pressure is hard to control and will avoid the possibility of perverse incentives to focus efforts away from those at highest absolute risk. The

previous Committee acknowledged that in order to achieve the targets outlined practitioners would need to aim below these levels.

For type 1 diabetes: DM002/NM01and DM003/NM02 do not outline the intervention level for blood pressure management as recommended in draft updated NICE guidance - 135/85 mmHg.

For type 2 diabetes: The intervention level for blood pressure management (140/80mmHg) is covered in current indicator DM003/NM02.

Key considerations

- Should indicators be developed to reflect the intervention level for blood pressure management in people with type 1 diabetes as recommended in draft updated NICE guidance - 135/85 mmHg.
- Should DM002/NM01 (BP >150/90mmHg) be maintained as an audit standard/'catch all' indicator for blood pressure

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5. Current indicators for measuring diabetes care

Appendix A of this paper presents a full assessment of current QOF and NICE menu indicators for diabetes against the updated and draft recommendations. The Committee is asked to:

- review and agree this impact assessment taking into consider areas requiring further consideration outlined above
- recommend any amendments to indicators not identified above
- advise on the need for piloting and development of indicators

Key considerations

The following key considerations summarise the main points made in the briefing paper and should be used by the Committee in their discussions. Committee is asked to consider:

- whether there should be a diabetes register for type 1 diabetes and another for all other types of diabetes including type 2.
- whether a new HbA1c target of 53 mmol/mol should be considered and the feasibility of an action measure for control of type 2 diabetes (where HbA1c is ≥58 mmol/mol)
- whether different blood pressure targets (including audit standards) should exist for people with different types of diabetes
- Retirement of DM004 in light that the use of an audit target for cholesterol monitoring is no longer recommended
- Development of indicators to address statin therapy/cholesterol management in people with type 1 diabetes

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Appendix A: Indicators mapped to recommendations

Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
Blood pressure management	The percentage of patients with diabetes, on the register, in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less	**NICE CG15: Type 1 diabetes (2004)** **1.10.3.1** Intervention levels for recommending blood pressure management should be 135/85 mmHg unless the person with type 1 diabetes has abnormal albumin excretion rate or two or more features of the metabolic syndrome (see section 1.10.1.3), in which case it should be 130/80 mmHg. **NICE CG87: Type 2 diabetes (2009)** **1.8.1** Measure blood pressure at least annually in a person without previously diagnosed hypertension or renal disease. Offer and reinforce preventive lifestyle advice. **1.8.3:** Repeat blood pressure (BP) measurements within: •1 month if BP is higher than 150/90 mmHg •2 months if BP is higher than 140/80 mmHg •2 months if BP is higher than 130/80 mmHg and there is kidney, eye or cerebrovascular damage.	**Type 1 diabetes in adults (2015)** **1.13.8** Intervention levels for recommending blood pressure management should be 135/85 mmHg unless the adult with type 1 diabetes has albuminuria or 2 or more features of the metabolic syndrome, in which case it should be 130/80 mmHg. [2004] **Type 2 diabetes in adults (2015)** **1.4.1** Measure blood pressure at least annually in an adult with type 2 diabetes without previously diagnosed hypertension or renal disease. Offer and reinforce preventive lifestyle advice. [2009] **1.4.3 Repeat blood pressure measurements within:** •1 month if BP is higher than 150/90 mmHg •2 months if BP is higher than 140/80 mmHg •2 months if BP is higher than 130/80 mmHg and there is kidney, eye or cerebrovascular damage.	Y
Blood pressure management	The percentage of patients with diabetes, on the register, in whom the last blood pressure reading (measured in the	**NICE CG15: Type 1 diabetes (2004)** **1.10.3.1** Intervention levels for recommending blood pressure management should be 135/85 mmHg unless the person with type 1 diabetes has abnormal albumin excretion rate or two or more features of the metabolic syndrome (see section 1.10.1.3), in which case it should be	**Types 1 diabetes in adults (2015)** **1.13.8** Intervention levels for recommending blood pressure managementshould be 135/85 mmHg unless the adult with type 1 diabetes has albuminuria or 2 or more features of the metabolic syndrome, in which case it should be 130/80 mmHg. [2004]	Y

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
	preceding 12 months) is 140/80 mmHg or less	130/80 mmHg. See also sections. **NICE CG87: Type 2 diabetes (2009)** **1.8.1** Measure blood pressure at least annually in a person without previously diagnosed hypertension or renal disease. Offer and reinforce preventive lifestyle advice. **1.8.3:** Repeat blood pressure (BP) measurements within: •1 month if BP is higher than 150/90 mmHg •2 months if BP is higher than 140/80 mmHg •2 months if BP is higher than 130/80 mmHg and there is kidney, eye or cerebrovascular damage. **1.8.4:** Offer lifestyle advice if blood pressure is confirmed as being consistently above 140/80 mmHg (or above 130/80 mmHg if there is kidney, eye or cerebrovascular damage).	**Type 2 diabetes in adults (2015)** **1.4.1** Measure blood pressure at least annually in an adult with type 2 diabetes without previously diagnosed hypertension or renal disease. Offer and reinforce preventive lifestyle advice. [2009] **1.4.3** Repeat blood pressure measurements within: •1 month if BP is higher than 150/90 mmHg •2 months if BP is higher than 140/80 mmHg •2 months if BP is higher than 130/80 mmHg and there is kidney, eye or cerebrovascular damage. **1.4.4** Provide lifestyle advice if blood pressure is confirmed as being consistently above 140/80 mmHg (or above 130/80 mmHg if there is kidney, eye or cerebrovascular damage). [2009]	
HbA1c targets	The percentage of patients with diabetes, on the register, in whom the last IFCC-HbA1c is 59 mmol/mol or less in the preceding 12 months	**NICE CG15: Type 1 diabetes (2004)** **1.9.2.1:** Adults with type 1 diabetes should be advised that maintaining a DCCT-harmonised HbA1c below 7.5% is likely to minimise their risk of developing diabetic eye, kidney or nerve damage in the longer term. **1.9.2.2:** Adults with diabetes who want to achieve an HbA1c down to, or towards, 7.5% should be given all appropriate support in their efforts to do so.	**Type 1 diabetes in adults (2015)** **1.6.6** Support adults with type 1 diabetes to achieve and maintain a target HbA1c level of 48 mmol/mol (6.5%) or lower, to minimise the risk of long-term vascular complications. [new 2015] **1.6.7** Agree an individualised HbA1c target with each adult with type 1 diabetes, taking into account factors such as the person's daily activities, aspirations, likelihood of complications, comorbidities, occupation and history of hypoglycaemia. [new 2015]	Y

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
		1.9.2.3: Where there is evidence of increased arterial risk (identified by a raised albumin excretion rate, features of the metabolic syndrome, or other arterial risk factors), people with type 1 diabetes should be advised that approaching lower HbA1c levels (for example, 6.5% or lower) may be of benefit to them. Support should be given to approaching this target if so wished. **<u>NICE CG87: Type 2 diabetes (2009)</u>** **1.3.1**: When setting a target glycated haemoglobin (HbA1c): • involve the person in decisions about their individual HbA1c target level, which may be above that of 6.5% set for people with type 2 diabetes in general • 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 to levels of less than 6.5%. **1.3.3:** If HbA1c levels remain above target	**1.6.8** Ensure that achieving, or attempting to achieve, an HbA1c target is not accompanied by problematic hypoglycaemia. [new 2015] **1.6.9** Diabetes services should document the proportion of adults with type 1 diabetes in a service who achieve an HbA1c level of 53 mmol/mol (7%) or lower. [new 2015] **<u>Type 2 diabetes in adults (2015)</u>** **1.6.5** Involve adults with type 2 diabetes in decisions about their individual HbA1c target. Encourage them to achieve the target and maintain it unless any resulting adverse effects (including hypoglycaemia), or their efforts to achieve their target, impair their quality of life. [new 2015] **1.6.7** Set a target HbA1c level of 48 mmol/mol (6.5%) for most adults with type 2 diabetes that is managed either by lifestyle and diet, or by lifestyle and diet in combination with a single drug that is not associated with hypoglycaemia. [new 2015] **1.6.8** If HbA1c levels rise to 58 mmol/mol (7.5%) or higher, intensify drug treatment, set a target HbA1c level of 53 mmol/mol (7.0%), and reinforce advice about diet, lifestyle and adherence to drug treatment. [new 2015] **1.6.9** Consider relaxing the target HbA1c level (see	

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
		levels, but pre-meal self-monitoring levels remain well controlled (< 7.0 mmol/litre), consider self-monitoring to detect postprandial hyperglycaemia (> 8.5 mmol/litre) and manage to below this level if detected.	recommendations 1.6.7 and 1.6.8) on a case-by-case basis for adults with type 2 diabetes: - who are unlikely to achieve longer-term risk-reduction benefits (for example, people with a reduced life expectancy) -for whom tight glycaemic control poses risks - with a high risk of the consequences of hypoglycaemia (for example, people who are at risk of falling, people who have impaired awareness of hypoglycaemia, and people who drive or operate machinery as part of their job) - for whom intensive management would not be appropriate (for example, people taking multiple drugs and people with significant comorbidities). These factors will need particular consideration for people who are older and frail. [new 2015] **1.6.10** If adults with type 2 diabetes achieve an HbA1c level that is lower than their target and they are not experiencing hypoglycaemia, encourage them to maintain it. [new 2015] **1.6.11** For guidance on HbA1c targets for women who are pregnant or planning to become pregnant, see the NICE guideline on diabetes in pregnancy. [new 2015]	
HbA1c targets	The percentage of patients with diabetes, on the register, in whom the last IFCC-HbA1c is 64	**NICE CG15: Type 1 diabetes (2004)** **1.9.2.1:** Adults with type 1 diabetes should be advised that maintaining a DCCT-harmonised HbA1c below 7.5% is likely to minimise their risk of developing diabetic eye, kidney or nerve damage in the longer term.	**Type 1 diabetes in adults (2015)** **1.6.6** Support adults with type 1 diabetes to achieve and maintain a target HbA1c level of 48 mmol/mol (6.5%) or lower, to minimise the risk of long-term vascular complications. [new 2015]	Y

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
	mmol/mol or less in the preceding 12 months	**1.9.2.2:** Adults with diabetes who want to achieve an HbA1c down to, or towards, 7.5% should be given all appropriate support in their efforts to do so. **1.9.2.3:** Where there is evidence of increased arterial risk (identified by a raised albumin excretion rate, features of the metabolic syndrome, or other arterial risk factors), people with type 1 diabetes should be advised that approaching lower HbA1c levels (for example, 6.5% or lower) may be of benefit to them. Support should be given to approaching this target if so wished. **NICE CG87: Type 2 diabetes (2009)** **1.3.1**: When setting a target glycated haemoglobin (HbA1c): • involve the person in decisions about their individual HbA1c target level, which may be above that of 6.5% set for people with type 2 diabetes in general • 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	**1.6.7** Agree an individualised HbA1c target with each adult with type 1 diabetes, taking into account factors such as the person's daily activities, aspirations, likelihood of complications, comorbidities, occupation and history of hypoglycaemia. [new 2015] **1.6.8** Ensure that achieving, or attempting to achieve, an HbA1c target is not accompanied by problematic hypoglycaemia. [new 2015] **1.6.9** Diabetes services should document the proportion of adults with type 1 diabetes in a service who achieve an HbA1c level of 53 mmol/mol (7%) or lower. [new 2015] **Type 2 diabetes in adults (2015)** **1.6.5** Involve adults with type 2 diabetes in decisions about their individual HbA1c target. Encourage them to achieve the target and maintain it unless any resulting adverse effects (including hypoglycaemia), or their efforts to achieve their target, impair their quality of life. [new 2015] **1.6.7** Set a target HbA1c level of 48 mmol/mol (6.5%) for most adults with type 2 diabetes that is managed either by lifestyle and diet, or by lifestyle and diet in combination with a single drug that is not associated with hypoglycaemia. [new 2015] **1.6.8** If HbA1c levels rise to 58 mmol/mol (7.5%) or higher, intensify drug treatment, set a target HbA1c	

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
		advantageous to future health • avoid pursuing highly intensive management to levels of less than 6.5%. **1.3.3:** If HbA1c levels remain above target levels, but pre-meal self-monitoring levels remain well controlled (< 7.0 mmol/litre), consider self-monitoring to detect postprandial hyperglycaemia (> 8.5 mmol/litre) and manage to below this level if detected (see sections 1.5–1.7).	level of 53 mmol/mol (7.0%), and reinforce advice about diet, lifestyle and adherence to drug treatment. See section 1.3. For more information about supporting adherence, see the NICE guideline on medicines adherence. [new 2015] **1.6.9** Consider relaxing the target HbA1c level (see recommendations 1.6.7 and 1.6.8) on a case-by-case basis for adults with type 2 diabetes: - who are unlikely to achieve longer-term risk-reduction benefits (for example, people with a reduced life expectancy) -for whom tight glycaemic control poses risks - with a high risk of the consequences of hypoglycaemia (for example, people who are at risk of falling, people who have impaired awareness of hypoglycaemia, and people who drive or operate machinery as part of their job) - for whom intensive management would not be appropriate (for example, people taking multiple drugs and people with significant comorbidities). These factors will need particular consideration for people who are older and frail. [new 2015] **1.6.10** If adults with type 2 diabetes achieve an HbA1c level that is lower than their target and they are not experiencing hypoglycaemia, encourage them to maintain it. [new 2015] **1.6.11** For guidance on HbA1c targets for women who are pregnant or planning to become pregnant, see the	

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
			NICE guideline on diabetes in pregnancy. [new 2015]	
HbA1c targets	The percentage of patients with diabetes, on the register, in whom the last IFCC-HbA1c is 75 mmol/mol or less in the preceding 12 months	**NICE CG15: Type 1 diabetes (2004)** **1.9.2.1:** Adults with type 1 diabetes should be advised that maintaining a DCCT-harmonised HbA1c below 7.5% is likely to minimise their risk of developing diabetic eye, kidney or nerve damage in the longer term. **1.9.2.2:** Adults with diabetes who want to achieve an HbA1c down to, or towards, 7.5% should be given all appropriate support in their efforts to do so. **1.9.2.3:** Where there is evidence of increased arterial risk (identified by a raised albumin excretion rate, features of the metabolic syndrome, or other arterial risk factors), people with type 1 diabetes should be advised that approaching lower HbA1c levels (for example, 6.5% or lower) may be of benefit to them. Support should be given to approaching this target if so wished. **NICE CG87: Type 2 diabetes (2009)** **1.3.1**: When setting a target glycated haemoglobin (HbA1c): • involve the person in decisions about their individual HbA1c target level, which may be above that of 6.5% set for people with type 2 diabetes in general • encourage the person to maintain their	**Type 1 diabetes in adults (2015)** **1.6.6** Support adults with type 1 diabetes to achieve and maintain a target HbA1c level of 48 mmol/mol (6.5%) or lower, to minimise the risk of long-term vascular complications. [new 2015] **1.6.7** Agree an individualised HbA1c target with each adult with type 1 diabetes, taking into account factors such as the person's daily activities, aspirations, likelihood of complications, comorbidities, occupation and history of hypoglycaemia. [new 2015] **1.6.8** Ensure that achieving, or attempting to achieve, an HbA1c target is not accompanied by problematic hypoglycaemia. [new 2015] **1.6.9** Diabetes services should document the proportion of adults with type 1 diabetes in a service who achieve an HbA1c level of 53 mmol/mol (7%) or lower. [new 2015] **Type 2 diabetes in adults (2015)** **1.6.5** Involve adults with type 2 diabetes in decisions about their individual HbA1c target. Encourage them to achieve the target and maintain it unless any resulting adverse effects (including hypoglycaemia), or their efforts to achieve their target, impair their quality of life. [new 2015] **1.6.7** Set a target HbA1c level of 48 mmol/mol (6.5%)	Y

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
		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 to levels of less than 6.5%. **1.3.3:** If HbA1c levels remain above target levels, but pre-meal self-monitoring levels remain well controlled (< 7.0 mmol/litre), consider self-monitoring to detect postprandial hyperglycaemia (> 8.5 mmol/litre) and manage to below this level if detected (see sections 1.5–1.7).	for most adults with type 2 diabetes that is managed either by lifestyle and diet, or by lifestyle and diet in combination with a single drug that is not associated with hypoglycaemia. [new 2015] **1.6.8** If HbA1c levels rise to 58 mmol/mol (7.5%) or higher, intensify drug treatment, set a target HbA1c level of 53 mmol/mol (7.0%), and reinforce advice about diet, lifestyle and adherence to drug treatment. [new 2015] **1.6.9** Consider relaxing the target HbA1c level (see recommendations 1.6.7 and 1.6.8) on a case-by-case basis for adults with type 2 diabetes: - who are unlikely to achieve longer-term risk-reduction benefits (for example, people with a reduced life expectancy) -for whom tight glycaemic control poses risks - with a high risk of the consequences of hypoglycaemia (for example, people who are at risk of falling, people who have impaired awareness of hypoglycaemia, and people who drive or operate machinery as part of their job) - for whom intensive management would not be appropriate (for example, people taking multiple drugs and people with significant comorbidities). These factors will need particular consideration for people who are older and frail. [new 2015] **1.6.10** If adults with type 2 diabetes achieve an HbA1c level that is lower than their target and they are not	

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
			experiencing hypoglycaemia, encourage them to maintain it. [new 2015] **1.6.11** For guidance on HbA1c targets for women who are pregnant or planning to become pregnant, see the NICE guideline on diabetes in pregnancy. [new 2015]	
Cholesterol management	The percentage of patients with diabetes, on the register, whose last measured total cholesterol (measured within the preceding 12 months) is 5 mmol/l or less	**NICE CG181: Lipid modification (2014)** 1.3.28 Measure total cholesterol, HDL cholesterol and non HDL cholesterol in all people who have been started on high intensity statin treatment at 3 months of treatment and aim for a greater than 40% reduction in non HDL cholesterol. If a greater than 40% reduction in non HDL cholesterol is not achieved: • discuss adherence and timing of dose • optimise adherence to diet and lifestyle measures • consider increasing the dose if started on less than atorvastatin 80 mg and the person is judged to be at higher risk because of comorbidities, risk score or using clinical judgement. 1.3.29 Provide annual medication reviews for people taking statins. • Use these reviews to discuss medicines adherence and lifestyle modification and address CVD risk factors. • Consider an annual non fasting blood test for non HDL cholesterol to inform the discussion.	**Type 1 diabetes in adults (2015)** **1.13.4** For guidance on the primary prevention of cardiovascular disease 2 in adults with type 1 diabetes, see recommendations 1.3.23 to 3 1.3.25 in the NICE guideline on lipid modification. [new 2015] **Type 2 diabetes in adults (2015)** **1.5.2** For guidance on the primary and secondary prevention of cardiovascular disease, see the NICE guidelines on lipid modification and myocardial infarction – secondary prevention. [new 2015]	Y
Register	The contractor	Register so not based on a specific	N/A	Y

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
	establishes and maintains a register of all patients aged 17 or over with diabetes mellitus, which specifies the type of diabetes where a diagnosis has been confirmed	recommendation		
Foot examination	The percentage of patients with diabetes with a record of testing of foot sensation using a 10 g monofilament or vibration (using biothesiometer or calibrated tuning fork), within the preceding 15 months	**NICE CG15: Type 1 diabetes (2004)** **1.11.3.4** Use of a 10 g monofilament plus non-traumatic pin prick is advised for detection of impairment of sensory nerve function sufficient to significantly raise risk of foot ulceration. **NICE CG 10: Type 2 diabetes: prevention and management of foot problems (2004)** **1.1.2.2:** Examination of patients' feet should include: • testing of foot sensation using a 10 g monofilament or vibration (using biothesiometer or calibrated tuning fork) • palpation of foot pulses • inspection for any foot deformity • inspection of footwear.	**NICE CG Foot problems (2015)** **1.3.3** For adults with diabetes, assess their risk of developing a diabetic foot problem at the following times: when diabetes is diagnosed, at least annually thereafter, if problems arise, and on any admission to hospital. **1.3.4** When examining a person's feet, remove their shoes, socks, bandages and dressings, and examine both feet for evidence of the following: • Neuropathy (use a 10 g monofilament to test foot sensation). • Limb ischaemia (also see the NICE guideline on lower limb peripheral arterial disease). • Ulceration. • Callus. • Infection and/or inflammation. • Deformity.	N

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
			• Gangrene. • Charcot arthropathy.	
Foot examination	The percentage of patients with diabetes with a record of a foot examination and risk classification: 1) low risk (normal sensation, palpable pulses), 2) increased risk (neuropathy or absent pulses), 3) high risk (neuropathy or absent pulses plus deformity or skin changes or previous ulcer) or 4) ulcerated foot within the preceding 15 months	**NICE CG15: Type 1 diabetes (2004)** **1.11.3.5** On the basis of findings from foot care surveillance, foot ulceration risk should be categorised into: •low current risk (normal sensation and palpable pulses) •increased risk (impaired sensory nerve function or absent pulses, or other risk factor) •high risk (impaired sensory nerve function and absent pulses or deformity or skin changes, or previous ulcer) • ulcer present. **NICE CG10: Type 2 diabetes: prevention and management of foot problems (2004)** **1.1.2.1:** Regular (at least annual) visual inspection of patients' feet, assessment of foot sensation, and palpation of foot pulses by trained personnel is important for the detection of risk factors for ulceration. **1.1.2.4** Classify foot risk as: • low current risk (normal sensation, palpable pulses) • at increased risk (neuropathy or absent pulses or other risk factor) • at high risk (neuropathy or absent pulses plus deformity or skin changes or previous ulcer) • ulcerated foot.	**NICE CG Foot problems (2015)** **1.3.6** Assess the person's risk of developing a diabetic foot problem using the following risk stratification: • Low risk: no risk factors present, for example, no signs of neuropathy, no signs of peripheral arterial disease, and no other risk factors. • Moderate risk: 1 risk factor present, for example, signs of neuropathy or signs of peripheral arterial disease, but without callus or deformity. Disabled adults who cannot see their feet are also at moderate risk. • High risk: previous ulceration or amputation, or on renal replacement therapy, or more than 1 risk factor present, for example, signs of neuropathy or signs of peripheral arterial disease, with callus or deformity. • Active diabetic foot problem: ulceration, spreading infection, critical ischaemia, gangrene, suspicion of an acute Charcot arthropathy, or an unexplained hot, red, swollen foot with or without pain.	N

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
Structured education	The percentage of patients newly diagnosed with diabetes, on the register, in the preceding 1 April to 31 March who have a record of being referred to a structured education programme within 9 months after entry on to the diabetes register	**NICE CG15: Type 1 diabetes (2004)** **1.8.1.1** A programme of structured diabetes education covering all major aspects of diabetes self-care and the reasons for it should be made available to all adults with type 1 diabetes in the months after diagnosis, and periodically thereafter according to agreed need following yearly assessment. **NICE CG87: Type 2 diabetes (2009)** **1.1.1** Offer structured education to every person and/or their carer at and around the time of diagnosis, with annual reinforcement and review. Inform people and their carers that structured education is an integral part of diabetes care.	**Type 1 diabetes in adults (2015)** **1.3.1** Offer all adults with type 1 diabetes a structured education programme of proven benefit, for example the DAFNE (dose-adjustment for normal eating) programme. Offer this programme 6–12 months after diagnosis, at a time that is clinically appropriate and suitable for the person. [new 2015] **Type 2 diabetes in adults (2015)** **1.2.1** Offer structured education to adults with type 2 diabetes and/or their family members or carers (as appropriate) at and around the time of diagnosis, with annual reinforcement and review. Explain to people and their carers that structured education is an integral part of diabetes care. [2009] **1.2.2** Ensure that any structured education programme for adults with type 2 diabetes includes the following components: • It is evidence-based, and suits the needs of the person. • It has specific aims and learning objectives, and supports the person and their family members and carers in developing attitudes, beliefs, knowledge and skills to self-manage diabetes. • It has a structured curriculum that is theory-driven, evidence-based and resource-effective, has supporting materials, and is written down. • It is delivered by trained educators who have an understanding of educational theory appropriate to the	N

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
			age and needs of the person, and who are trained and competent to deliver the principles and content of the programme. • It is quality assured, and reviewed by trained, competent, independent assessors who measure it against criteria that ensure consistency. • The outcomes are audited regularly. [2015]	
Dietary advice	The percentage of patients with diabetes who have a record of a dietary review by a suitably competent professional in the preceding 15 months	**NICE CG15: Type 1 diabetes (2004)** **1.8.3.1:** Nutritional information sensitive to personal needs and culture should be offered from the time of diagnosis of type 1 diabetes. **NICE CG87: Type 2 diabetes (2009)** **1.3.1** Provide individualised and ongoing nutritional advice from a healthcare professional with specific expertise and competencies in nutrition. [2009].	**Type 1 diabetes in adults (2015)** **1.4.6** Provide nutritional information individually and as part of a diabetes education programme. Include advice from professionals with specific and approved training and continuing accredited education in delivering nutritional advice to people with health conditions. Offer opportunities to receive nutritional advice at intervals agreed between adults with type 1 diabetes and their advising professionals. [2004] **Type 2 diabetes in adults (2015)** **1.3.1** Provide individualised and ongoing nutritional advice from a healthcare professional with specific expertise and competencies in nutrition. [2009]	N
Smoking	The percentage of patients with any or any combination of the following conditions: CHD, PAD, stroke or TIA, hypertension,	Guideline recommendations for smoking cessation in the context of chronic disease management are addressed in a number of clinical guidelines: • Asthma (SIGN clinical guideline 101, 2012) • Chronic kidney disease (NICE clinical guideline 73, 2008)	**Type 1 diabetes in adults (2015)** **1.13.5** Give adults with type 1 diabetes who smoke advice on smoking cessation and use of smoking cessation services, including NICE guidance-recommended therapies. Reinforce these messages annually for people who currently do not plan to stop smoking, and 8 at all clinical contacts if there is a prospect of the person stopping. [2004]	N

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
	diabetes, COPD, CKD, asthma, schizophrenia, bipolar affective disorder or other psychoses who are recorded as current smokers who have a record of an offer of support and treatment within the preceding 12 months.	• Chronic obstructive pulmonary disease (NICE clinical guideline 101, 2010) • Diabetes (SIGN clinical guideline 116, 2010) • Hypertension (NICE clinical guideline 127, 2011) • Lower limb peripheral arterial disease (NICE clinical guideline 147, 2012) • Myocardial infarction (NICE clinical guideline 48, 2007) • Schizophrenia (NICE clinical guideline 82, 2009) • Stroke (SIGN clinical guideline 108, 2008)	**PH45: Tobacco: harm-reduction approaches to smoking (2013)**	
Smoking	The percentage of patients with any or any combination of the following conditions: CHD, PAD, stroke or TIA, hypertension, diabetes, COPD, CKD, asthma, schizophrenia, bipolar affective disorder or other psychoses who smoke whose notes contain a record of an offer	Guideline recommendations for smoking cessation in the context of chronic disease management are addressed in a number of clinical guidelines: • Asthma (SIGN clinical guideline 101, 2012) • Chronic kidney disease (NICE clinical guideline 73, 2008) • Chronic obstructive pulmonary disease (NICE clinical guideline 101, 2010) • Diabetes (SIGN clinical guideline 116, 2010) • Hypertension (NICE clinical guideline 127, 2011) • Lower limb peripheral arterial disease (NICE clinical guideline 147, 2012) • Myocardial infarction (NICE clinical guideline 48, 2007) • Schizophrenia (NICE clinical guideline 82,	**Type 1 diabetes in adults (2015)** **1.13.5** Give adults with type 1 diabetes who smoke advice on smoking cessation and use of smoking cessation services, including NICE guidance-recommended therapies. Reinforce these messages annually for people who currently do not plan to stop smoking, and at all clinical contacts if there is a prospect of the person stopping. [2004] **PH45: Tobacco: harm-reduction approaches to smoking (2013)**	N

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
	of support and treatment within the preceding 15 months.	2009) • Stroke (SIGN clinical guideline 108, 2008)		
Erectile dysfunction	The percentage of male patients with diabetes with a record of being asked about erectile dysfunction in the preceding 15 months	**NICE CG15: Type 1 diabetes (2004)** **1.11.4.1** Men should be asked annually whether erectile dysfunction is an issue **NICE CG87: Type 2 diabetes (2009)** **1.14.4.1:** Review the issue of erectile dysfunction with men annually.	**Type 1 diabetes in adults (2015)** **1.15.30** Offer men with type 1 diabetes the opportunity to discuss erectile dysfunction as part of regular review. [2015] **Type 2 diabetes in adults (2015)** **1.7.12** Offer men with type 2 diabetes the opportunity to discuss erectile dysfunction as part of their annual review. [2015]	N
Erectile dysfunction	The percentage of male patients with diabetes who have a record of erectile dysfunction with a record of advice and assessment of contributory factors and treatment options in the preceding 15 months	**NICE CG15: Type 1 diabetes (2004)** **1.11.4.2** A PDE5 (phosphodiesterase-5) inhibitor drug, if not contraindicated, should be offered where erectile dysfunction is a problem. **1.11.4.3** Referral to a service offering other medical and surgical management of erectile dysfunction should be discussed where PDE5 inhibitors are not successful **NICE CG87: Type 2 diabetes (2009)** **1.14.4.2:** Provide assessment and education for men with erectile dysfunction to address contributory factors and treatment options.	**Type 1 diabetes in adults (2015)** **1.15.30** Offer men with type 1 diabetes the opportunity to discuss erectile dysfunction as part of regular review **Type 2 diabetes in adults (2015)** **1.7.13** Carry out an assessment, and provide education and support for men with type 2 diabetes who have problematic erectile dysfunction, addressing contributory factors such as cardiovascular disease as well as possible treatment options. [2015] **1.7.14** Consider a phosphodiesterase-5 inhibitor to treat problematic erectile dysfunction, initially choosing the drug with the lowest acquisition cost and taking into account any contraindications. [new 2015] **1.7.15** Following discussion, refer men with type 2 diabetes to a service offering other medical, surgical, or	N

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
			psychological management of erectile dysfunction if treatment (including a phosphodiesterase-5 inhibitor, if appropriate) has been unsuccessful. [2015]	
Kidney management	The percentage of patients with diabetes who have a record of an albumin:creatinine ratio (ACR) test in the preceding 15 months	**NICE CG15: Type 1 diabetes (2004)** **1.11.2.1** All adults with type 1 diabetes with or without detected nephropathy should be asked to bring in a first-pass morning urine specimen once a year. This should be sent for estimation of albumin:creatinine ratio. Estimation of urine albumin concentration alone is a poor alternative. Serum creatinine should be measured at the same time. **NICE CG87: Type 2 diabetes (2009)** **1.12.3:** Measure serum creatinine and estimate the glomerular filtration rate (using the method-abbreviated modification of diet in renal disease [MDRD] four-variable equation) annually at the time of albumin:creatinine ratio estimation.	**Type 1 diabetes in adults (2015)** **1.1.6** At the time of diagnosis (or if necessary after the management of critically decompensated metabolism), the diabetes professional team should develop with and explain to the adult with type 1 diabetes a plan for their early care. To agree such a plan will generally require: • medical assessment to: -ensure security of diagnosis of type of diabetes -ensure appropriate acute care is given when needed -review and detect potentially confounding disease and medicines -detect adverse vascular risk factors • environmental assessment to understand: -the social, home, work and recreational circumstances of the person and carers -their preferences in nutrition and physical activity -other relevant factors, such as substance use • cultural and educational assessment to identify prior knowledge and to enable optimal advice and planning about: -treatment modalities -diabetes education programmes •assessment of emotional state to determine the	N

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
			appropriate pace of education. The results of the assessment should be used to agree a future care plan. Some items of the initial diabetes assessment: • acute medical history • social, cultural and educational history/lifestyle review • complications history/symptoms • long-term/recent diabetes history • other medical history/systems • family history of diabetes/arterial disease • medication history/current medicines • vascular risk factors • smoking • general examination • weight/BM • foot/eye/vision examination • urine albumin excretion/urine protein/serum creatinine • psychological wellbeing • attitudes to medicine and self-care • immediate family and social relationships and availability of informal support. [2004] **NICE CG182: Chronic kidney disease (2014)** **1.1.18** To detect and identify proteinuria, use urine ACR in preference to protein:creatinine ratio (PCR), because it has greater sensitivity than PCR for low levels of proteinuria. For quantification and monitoring of levels of proteinuria of ACR 70 mg/mmol or more, PCR can be used as an alternative. ACR is the	

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
			recommended method for people with diabetes. [2008, amended 2014]	
Pregnancy advice	The percentage of women with diabetes aged 17 or over and who have not attained the age of 45 who have a record of being given information and advice about pregnancy or conception or contraception tailored to their pregnancy and contraceptive intentions recorded in the preceding 12 months	**NICE CG63: Diabetes in pregnancy (2008)** **1.1.2.2:** Women with diabetes who are planning to become pregnant should be advised: • that the risks associated with pregnancies complicated by diabetes increase with the duration of diabetes • to use contraception until good glycaemic control (assessed by HbA1c) has been established • that glycaemic targets, glucose monitoring, medications for diabetes (including insulin regimens for insulin-treated diabetes) and medications for complications of diabetes will need to be reviewed before and during pregnancy • that additional time and effort is required to manage diabetes during pregnancy and that there will be frequent contact with healthcare professionals. Women should be given information about the local arrangements for support, including emergency contact numbers.	**NICE CG Diabetes in pregnancy (2015)** **1.1.7** Advise women with diabetes who are planning to become pregnant: •that the risks associated with pregnancy in women with diabetes increase with how long the woman has had diabetes •to use contraception until good blood glucose control (assessed by HbA1c level[2] – see recommendation 1.1.18) has been established •that blood glucose targets, glucose monitoring, medicines for treating diabetes (including insulin regimens for insulin-treated diabetes) and medicines for complications of diabetes will need to be reviewed before and during pregnancy •that extra time and effort is needed to manage diabetes during pregnancy and that she will have frequent contact with healthcare professionals. [2015] **1.1.18** Advise women with diabetes who are planning to become pregnant to aim to keep their HbA1c level[2] below 48 mmol/mol (6.5%), if this is achievable without causing problematic hypoglycaemia. [new 2015]	N
Nine care processes	The percentage of patients with diabetes who have had the following care processes performed in the	**NICE CG15: Type 1 diabetes (2004)** **1.10.1.1:** Arterial risk factors should be assessed annually, and the assessment should include: • albumin excretion rate • smoking • blood glucose control	**Type 1 diabetes in adults (2015)** **1.13.2** Assess arterial risk factors annually, including: • albuminuria • smoking • blood glucose control • blood pressure • full lipid profile (including HDL and LDL cholesterol	N

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
	preceding 12 months: BMI measurement; BP measurement; HbA1c measurement; Cholesterol measurement; Record of smoking status; Foot examination; Albumin: creatinine ratio; Serum creatinine measurement	• blood pressure • full lipid profile (including HDL and LDL cholesterol and triglycerides) • age • family history of arterial disease • abdominal adiposity. **1.11.2.1** All adults with type 1 diabetes with or without detected nephropathy should be asked to bring in a first-pass morning urine specimen once a year. This should be sent for estimation of albumin:creatinine ratio. Estimation of urine albumin concentration alone is a poor alternative. Serum creatinine should be measured at the same time. Recommendation 1.11.3.1: Structured foot surveillance should be at 1-year intervals, and should include educational assessment and education input commensurate with the assessed risk. **NICE CG87: Type 2 diabetes (2009)** **1.8.1**: Measure blood pressure at least annually in a person without previously diagnosed hypertension or renal disease. Offer and reinforce preventive lifestyle advice. **1.3.2:** Measure the individual's HbA1c levels at: • 2–6-monthly intervals (tailored to individual needs) until the blood glucose level is stable on unchanging therapy; use a measurement made	and 20 triglycerides) • age • family history of arterial disease • abdominal adiposity. [2004, amended 2015] **1.15.16** Ask all adults with type 1 diabetes with or without detected nephropathy to bring in the first urine sample of the day ('early morning urine') once a year. Send this for estimation of albumin:creatinine ratio. Estimation of urine albumin concentration alone is a poor alternative. Serum creatinine should be measured at the same time **Type 2 diabetes in adults (2015)** **1.4.1** Measure blood pressure at least annually in an adult with type 2 diabetes without previously diagnosed hypertension or renal disease. Offer and reinforce preventive lifestyle advice. [2009] **1.6.1** Measure HbA1c levels at: •3–6 monthly intervals (tailored to individual needs), until the HbA1c is stable on unchanging therapy • 6-monthly intervals once the HbA1c level and blood glucose lowering therapy are stable. [2015] **1.5.2** For guidance on the primary and secondary prevention of cardiovascular disease, see the NICE guidelines on lipid modification and myocardial infarction – secondary prevention. [new 2015] **1.7.11** For guidance on nephropathy in adults with type	

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
		at an interval of less than 3 months as a indicator of direction of change, rather than as a new steady state. • 6-monthly intervals once the blood glucose level and blood glucose-lowering therapy are stable. **1.9.4:** Perform a full lipid profile (including high-density lipoprotein [HDL] cholesterol and triglyceride estimations) when assessing cardiovascular risk after diagnosis and annually, and before starting lipid-modifying therapy. **1.12.1:** Ask all people with or without detected nephropathy to bring in a first-pass morning urine specimen once a year. In the absence of proteinuria/urinary tract infection (UTI), send this for laboratory estimation of albumin:creatinine ratio. Request a specimen on a subsequent visit if UTI prevents analysis. **1.12.3:** Measure serum creatinine and estimate the glomerular filtration rate (using the method-abbreviated modification of diet in renal disease [MDRD] four-variable equation) annually at the time of albumin:creatinine ratio estimation. **1.3.4** Integrate dietary advice with a personalised diabetes management plan,	2 diabetes, see the NICE guideline on chronic kidney disease. [new 2015] **1.3.4** Integrate dietary advice with a personalised diabetes management plan, including other aspects of lifestyle modification, such as increasing physical activity and losing weight. [2009] **NICE CG Foot problems (2015)** **1.3.3** For adults with diabetes, assess their risk of developing a diabetic foot problem at the following times: when diabetes is diagnosed, at least annually thereafter (see recommendation 1.3.11), if problems arise, and on any admission to hospital. **NICE CG182: Chronic kidney disease (2014)** **1.1.18** To detect and identify proteinuria, use urine ACR in preference to protein:creatinine ratio (PCR), because it has greater sensitivity than PCR for low levels of proteinuria. For quantification and monitoring of levels of proteinuria of ACR 70 mg/mmol or more, PCR can be used as an alternative. ACR is the recommended method for people with diabetes. [2008, amended 2014]	

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
		including other aspects of lifestyle modification, such as increasing physical activity and losing weight. [2009] **NICE CG10: Type 2 diabetes (2004)** **1.1.2.1:** Regular (at least annual) visual inspection of patients' feet, assessment of foot sensation, and palpation of foot pulses by trained personnel is important for the detection of risk factors for ulceration		
Kidney care	The percentage of patients with diabetes, on the register, with a diagnosis of nephropathy (clinical proteinuria) or micro-albuminuria who are currently treated with an ACE-I (or ARBs)	**NICE CG15: Type 1 diabetes (2004)** **1.11.2.5** ACE inhibitors should be started and, with the usual precautions, titrated to full dose in all adults with confirmed nephropathy (including those with microalbuminuria alone) and type 1 diabetes. **1.11.2.6** If ACE inhibitors are not tolerated, angiotensin 2 receptor antagonists should be substituted. Combination therapy is not recommended at present **NICE CG87: Type 2 diabetes (2009)** **1.12.7** Start ACE inhibitors with the usual precautions and titrate to full dose in all individuals with confirmed raised albumin excretion rate (>2.5 mg/mmol for men, >3.5 mg/mmol for women).	**Type 1 diabetes in adults (2015)** **1.15.19** Start angiotensin-converting enzyme (ACE) inhibitors and, with the usual precautions, titrate to full dose in all adults with confirmed nephropathy (including those with low-level albuminuria [microalbuminuria] alone) and type 1 diabetes. [2004] **1.15.20** If ACE inhibitors are not tolerated, substitute angiotensin 2 receptor 23 antagonists. Combination therapy is not recommended. [2004, 24 amended 2015] **Type 2 diabetes in adults (2015)** **1.4.7:** First-line antihypertensive drug treatment should be a once-daily, generic angiotensin-converting enzyme (ACE) inhibitor. Exceptions to this are people of African or Caribbean family origin, or women for whom there is a possibility of becoming pregnant. [2009]	N

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
		1.12.9 Substitute an angiotensin II-receptor antagonist for an ACE inhibitor for a person with an abnormal albumin:creatinine ratio if an ACE inhibitor is poorly tolerated **SIGN CG116: Diabetes (2010)** People with type 1 diabetes and micro albuminuria should be treated with an ACE inhibitor irrespective of blood pressure. People with type 2 diabetes and micro albuminuria should be treated with an ACE inhibitor or an ARB irrespective of blood pressure.	**1.4.8** The first-line antihypertensive drug treatment for a person of African or Caribbean family origin should be an ACE inhibitor plus either a diuretic or a generic calcium-channel blocker. [2009] **1.4.10** For a person with continuing intolerance to an ACE inhibitor (other than renal deterioration or hyperkalaemia), substitute an angiotensin II-receptor antagonist for the ACE inhibitor. [2009]	
Retinal screening	The percentage of patients with diabetes, on the register, who have a record of retinal screening in the preceding 12 months	**NICE CG15: Type 1 diabetes (2004)** **1.11.1.1:** Eye surveillance for adults newly diagnosed with type 1 diabetes should be started from diagnosis. **1.11.1.2** Depending on the findings, structured eye surveillance should be followed by: • routine review in 1 year, or • earlier review, or • referral to an ophthalmologist. **1.11.1.3:** Structured eye surveillance should be at 1-year intervals. **NICE CG87: Type 2 diabetes (2009)** **1.13.1:** Arrange or perform eye screening at or around the time of diagnosis. Arrange repeat of	**Adults type 1 diabetes in adults (2015)** **1.15.6** Start eye screening for adults newly diagnosed with type 1 diabetes from diagnosis. [2004] **1.15.7** Depending on the findings, follow structured eye screening by: - routine review in 1 year or - earlier review or - referral to an ophthalmologist. [2004] **Adults type 2 diabetes in adults (2015)** **1.7.16** Arrange or perform eye screening at or around the time of diagnosis. Arrange repeat of structured eye screening annually. [2009]	N

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Area of care	Current indicator(s)	NICE recommendation(s)	Updated NICE recommendation(s)	Update required?
		structured eye surveillance annually.		
Immunisation	The percentage of patients with diabetes, on the register, who have had influenza immunisation in the preceding 1 August to 31 March	**Clinical Knowledge Summaries (CKS) - Immunisations seasonal flu**	N/A	N

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References

Confidential Enquiry into Maternal and Child Health Improving the health of mothers, babies and children (CEMACH), Pregnancy in women with type 1 and type 2 diabetes 2002–2003 England, Wales and Northern Ireland, 2005.