NICE National Institute for Health and Care Excellence

NICE Pathways

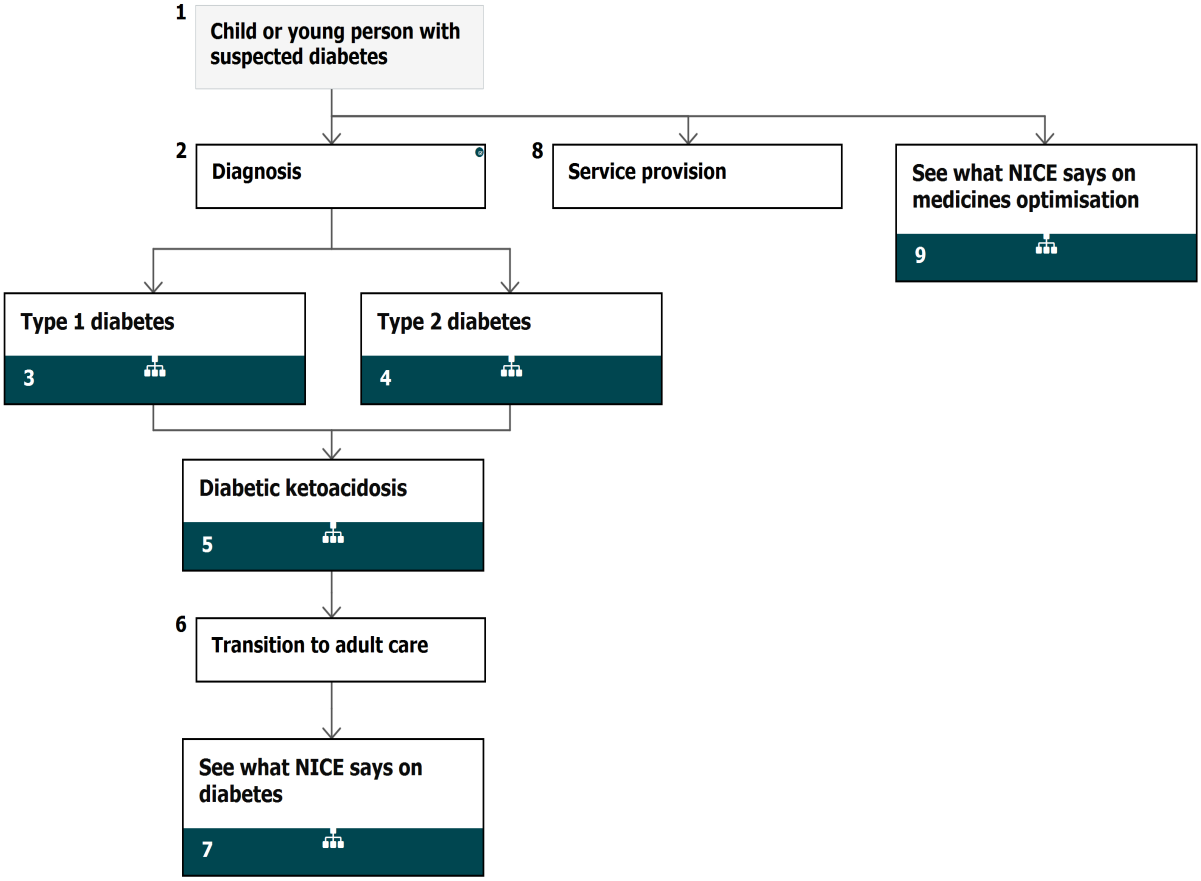
Diabetes in children and young people overview

NICE Pathways bring together everything NICE says on a topic in an interactive flowchart. NICE Pathways are interactive and designed to be used online.

They are updated regularly as new NICE guidance is published. To view the latest version of this NICE Pathway see:

http://pathways.nice.org.uk/pathways/diabetes-in-children-and-young-people
NICE Pathway last updated: 14 December 2018

This document contains a single flowchart and uses numbering to link the boxes to the associated recommendations.



1 Child or young person with suspected diabetes

No additional information

2 Diagnosis

Be aware that the characteristics of type 1 diabetes in children and young people include:

- hyperglycaemia (random plasma glucose more than 11 mmol/litre)
- polyuria
- polydipsia
- weight loss
- excessive tiredness.

Refer children and young people with suspected type 1 diabetes immediately (on the same day) to a multidisciplinary paediatric diabetes team with the competencies needed to confirm diagnosis and to provide immediate care.

Confirm type 1 diabetes in children and young people using the plasma glucose criteria specified in the World Health Organization's 2006 report on the diagnosis and classification of diabetes mellitus.

When diagnosing diabetes in a child or young person, assume type 1 diabetes unless there are strong indications of type 2 diabetes, monogenic or mitochondrial diabetes.

Think about the possibility of type 2 diabetes in children and young people with suspected diabetes who:

- have a strong family history of type 2 diabetes
- are obese at presentation
- are of black or Asian family origin
- have no insulin requirement, or have an insulin requirement of less than 0.5 units/kg body weight/day after the partial remission phase
- show evidence of insulin resistance (for example, acanthosis nigricans).

Think about the possibility of types of diabetes other than types 1 or 2 (such as other insulin resistance syndromes, or monogenic or mitochondrial diabetes) in children and young people with suspected diabetes who have any of the following features:

- diabetes in the first year of life
- rarely or never develop ketone bodies in the blood (ketonaemia) during episodes of hyperglycaemia
- associated features, such as optic atrophy, retinitis pigmentosa, deafness, or another systemic illness or syndrome.

Do not measure C-peptide and/or diabetes-specific autoantibody titres at initial presentation to distinguish type 1 diabetes from type 2 diabetes.

Consider measuring C-peptide after initial presentation if there is difficulty distinguishing type 1 diabetes from other types of diabetes. Be aware that C-peptide concentrations have better discriminative value the longer the interval between initial presentation and the test.

Perform genetic testing if atypical disease behaviour, clinical characteristics or family history suggest monogenic diabetes.

Also see recommendations about home-based or inpatient management in service provision [See page 5].

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

1. Same-day referral and appointments

3 Type 1 diabetes

See Diabetes in children and young people / Type 1 diabetes in children and young people

4 Type 2 diabetes

See Diabetes in children and young people / Type 2 diabetes in children and young people

5 Diabetic ketoacidosis

See Diabetes in children and young people / Diabetic ketoacidosis in children and young people

6 Transition to adult care

Allow sufficient time for young people with diabetes to familiarise themselves with the practicalities of the transition from paediatric to adult services because this improves clinic attendance.

Agree specific local protocols for transferring young people with diabetes from paediatric to adult services.

Base the decision about the age of transfer to the adult service on the young person's physical development and emotional maturity, and local circumstances.

Ensure that transition from the paediatric service occurs at a time of relative stability in the young person's health and is coordinated with other life transitions.

Explain to young people with type 1 diabetes who are preparing for transition to adult services that some aspects of diabetes care will change at transition.

For further information, see what NICE says on diabetes in pregnancy, patient experience in adult NHS services, type 1 diabetes in adults, type 2 diabetes in adults and transition from children's to adults' services.

7 See what NICE says on diabetes

See Diabetes

8 Service provision

Offer children and young people with diabetes an ongoing integrated package of care provided by a multidisciplinary paediatric diabetes team. To optimise the effectiveness of care and reduce the risk of complications, the diabetes team should include members with appropriate training in clinical, educational, dietetic, lifestyle, mental health and foot care aspects of diabetes for children and young people.

Diabetes teams should have appropriate access to mental health professionals to support them in psychological assessment and the delivery of psychosocial support.

Offer children and young people with diabetes and their family members or carers (as appropriate) 24-hour access to advice from their diabetes team.

Involve children and young people with diabetes and their family members or carers (as appropriate) in making decisions about the package of care provided by their diabetes team.

At diagnosis, offer children and young people with diabetes home-based or inpatient management according to clinical need, family circumstances and wishes. Explain that home-based care with support from the local paediatric diabetes team (including 24-hour telephone access) is safe and as effective as inpatient initial management.

Offer initial inpatient management to children with diabetes who are aged under 2 years.

Think about initial inpatient management for children and young people with diabetes if there are social or emotional factors that would make home-based management inappropriate, or if they live a long distance from the hospital.

Diabetes teams should liaise regularly with school staff supervising children and young people with type 1 diabetes to provide appropriate diabetes education and practical information.

Record the details of children and young people with diabetes on a population-based, practice-based or clinic-based diabetes register.

Diabetes services should document the proportion of children and young people with diabetes in a service who achieve an HbA1c level of 53 mmol/mol (7%) or lower.

Organisation of surgical care

Offer surgery to children and young people with diabetes only in centres that have dedicated paediatric facilities for caring for children and young people with diabetes.

All centres caring for children and young people with diabetes should have written protocols on safe surgery for children and young people. The protocols should be agreed between surgical and anaesthetic staff and the diabetes team.

Ensure that there is careful liaison between surgical, anaesthetic and diabetes teams before children and young people with type 1 diabetes are admitted to hospital for elective surgery and as soon as possible after admission for emergency surgery.

9 See what NICE says on medicines optimisation

See Medicines optimisation

Sources

Diabetes (type 1 and type 2) in children and young people: diagnosis and management (2015) NICE guideline NG18

Your responsibility

Guidelines

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Technology appraisals

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, health professionals are expected to take these recommendations fully into account, alongside the individual needs, preferences and values of their patients. The application of the

recommendations in this interactive flowchart is at the discretion of health professionals and their individual patients and do not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Commissioners and/or providers have a responsibility to provide the funding required to enable the recommendations to be applied when individual health professionals and their patients wish to use it, in accordance with the NHS Constitution. They should do so in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Medical technologies guidance, diagnostics guidance and interventional procedures guidance

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take these recommendations fully into account. However, the interactive flowchart does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the recommendations, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this interactive flowchart should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.