

Referral and Ongoing Care for Children with Suspected Diabetes

Dear Colleagues,

On behalf of the Children and Young People's Wales Diabetes Network, we are delighted to introduce these guidelines for the diagnosis and timely referral of children and young people with diabetes.

We would like to take this opportunity to remind everyone that the majority of children who develop diabetes have Type 1 Diabetes, the diagnosis and treatment of which is a medical emergency in order to prevent children developing Diabetic Ketoacidosis – the principle cause of mortality in children with diabetes. The speed of response required is very different to Type 2 diabetes.

25-30% of children are in DKA at diagnosis in the UK, which is approximately twice the rate in some countries, such as Sweden. A recent BSPED survey identified that 24% of recently diagnosed children had seen multiple health care professionals before the diagnosis was made. It should be emphasised that the diagnosis of diabetes and initiation of treatment in children and young people should be considered with urgency and not be managed in the same manner of diagnosing Type 2 diabetes in adults.

In the Diabetes Delivery Plan published in December 2016¹, the Welsh Government has made the prompt diagnosis of diabetes in children a priority for all healthcare professionals. We hope these guidelines help us to achieve this aim, and are clear and easy to implement. Please circulate them widely.

They complement the 4Ts awareness campaign by Diabetes UK, who produce excellent free posters that should be displayed anywhere children and parents go to raise awareness in the general population. Please order some and display them in your place of work. You can order them from www.diabetes.org.uk/the4ts

Kind Regards,

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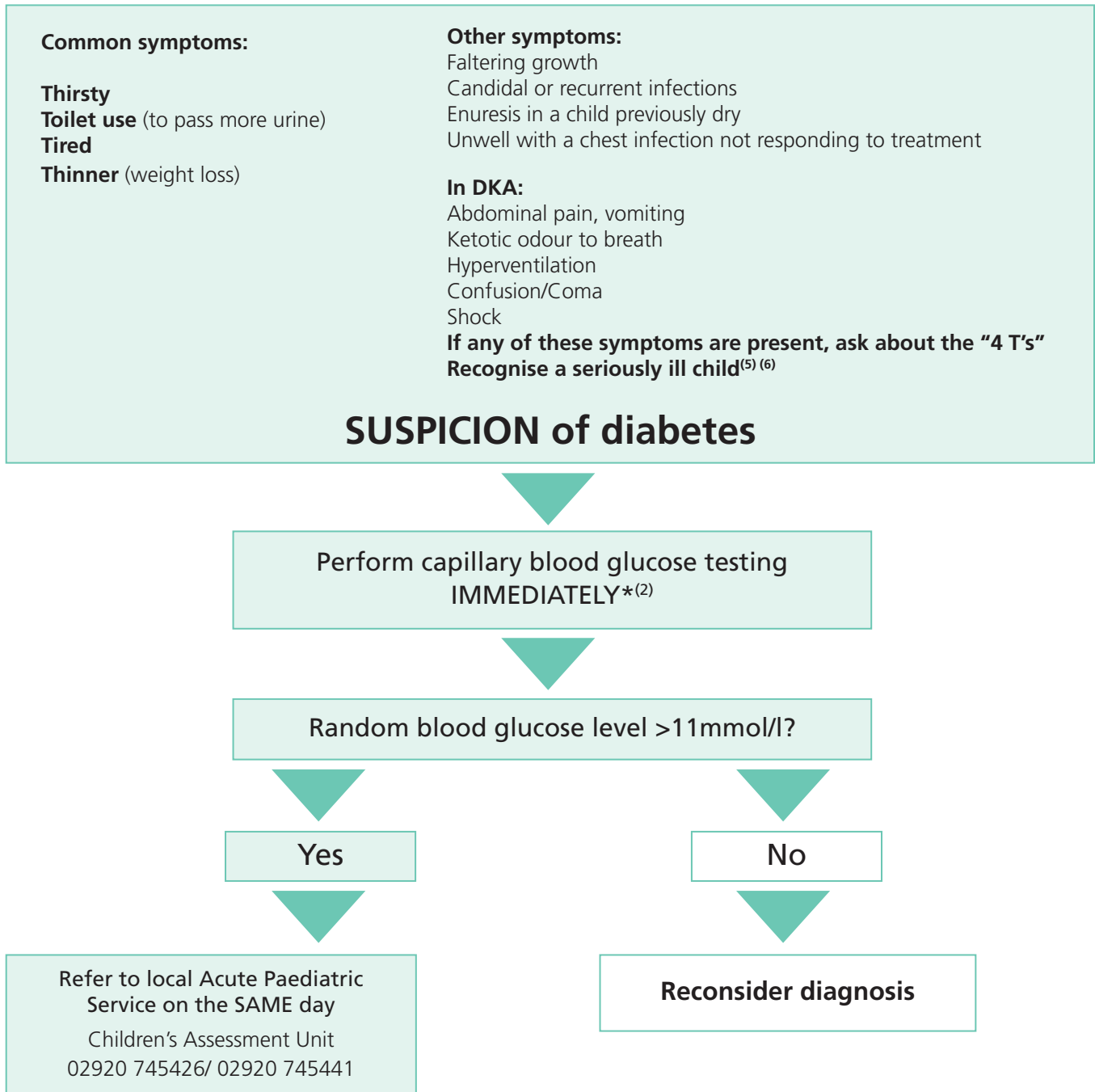


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Referral and Ongoing Care for Children with Suspected Diabetes

This pathway is for children and young people up to their 16th birthday



* In accordance with current NICE guidance
If BG testing is not available then perform urinary dipstick testing
If BG or urinalysis not available then refer immediately
Do not perform fasting BG measurement, HbA1C, or glucose tolerance test

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Background

- There are approximately 1400 children with diabetes in Wales, of which the vast majority (96%) have type 1 diabetes.⁽³⁾
- Approximately 25% of cases are not diagnosed until the child is in diabetic ketoacidosis (DKA), although this rate is higher (approx. 35%) in the under 5s.
- DKA requires intensive medical intervention, is traumatising for the child, and may have a long-term adverse effect on their diabetes control. DKA is the commonest cause of death in children with diabetes.

Symptoms of type 1 diabetes

- Classic symptoms: Polyuria, polydipsia, weight loss, lethargy
- Less classic symptoms: Enuresis / nocturia in a previously toilet-trained child, unusually heavy nappies, vaginal candidiasis (esp. in pre-pubertal girls), failure to gain weight in a growing child, poor school performance, recurrent infections
- Emergency symptoms (suggestive of DKA): Dehydration, vomiting, ketotic breath, abdominal pain, hyperventilation, confusion, shock

Be aware:

- 1) Symptoms can progress within hours or days. Have a high index of suspicion. Think of the Diabetes UK campaign of 4Ts: Toilet, Thirsty, Tired, Thinner.⁽⁴⁾ Not all of the symptoms are necessary to consider the diagnosis.
- 2) Diagnosis of diabetes can be missed in younger / preschool children due to a more rapid progression of symptoms, failure to consider the diagnosis, and more non-specific symptoms.

Symptoms suggesting type 2 diabetes

- Obesity, strong family history of T2DM, acanthosis nigricans, high risk racial or ethnic group

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Care pathway for initial management of diabetes in children

Suspicion of diabetes (primary care)

- Perform capillary blood glucose (BG) testing immediately
- If BG testing is not available then perform urinary dipstick testing
- If BG or urinalysis not available then refer immediately (see below)
- **Do not** perform fasting BG measurement, HbA1C, or glucose tolerance test
- **Do not** refer as an outpatient

If BG >11mmol/l or glycosuria (+/- ketonuria)

- Refer immediately to the acute Paediatric on-call team
- Inform child and family of the suspected diagnosis of diabetes
- If BG 7-10.9mmol/l, diabetes or hyperglycaemia due to illness, should be considered discuss with acute Paediatric on call team.
- If BG 4-6.9mmol/l, unlikely to be diabetes
- If BG <4mmol/l, manage and consider causes for hypoglycaemia, refer immediately to the acute Paediatric on call team

Type 1 diabetes (secondary care)

Local paediatric team to confirm diagnosis and:

- Admit to hospital
- Management → DKA according to All Wales Integrated care pathway
→ All Wales new diagnosis guideline for well children with diabetes
- Stabilise blood glucose levels prior to discharge
- Begin age-appropriate structured education with the child and family (using the all-Wales SEREN programme)
- Provide initial prescriptions for insulin and equipment for the diabetes management (further prescriptions to be dispensed in primary care)

Other forms of diabetes, including Type 2 diabetes, CFRD and monogenic diabetes

- Manage according to local expertise with involvement of tertiary specialists as appropriate to case

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Ongoing care for children with diabetes in secondary care

- Care will be provided by a specialist multidisciplinary team (MDT) including a paediatrician with expertise in diabetes, paediatric diabetes specialist nurse(s), dietitian(s) and psychologist (where available).
- Although the MDT will be based in secondary care, support for the child and their family will also be provided in the community both at home and at school.
- A minimum of 4 outpatient appointments and HbA1c measurements per year including one annual review appointment, and an additional appointment with a dietitian and a psychologist
- Regular contact with the diabetes team, which might include telephone support/advice, home or school visits, and ongoing education.
- 24 hour access to advice on diabetes management for patients
- Transition to adult services at a stage appropriate to the young person in accordance with locally agreed pathways

Contact Details

Cardiff & Vale University Health Board University Hospital of Wales

Referrals: Children's Assessment Unit; 02920745426/ 02920745441

Out of hours advice: Paediatric Registrar via CAU 02920745426/ 02920745441

References

- (1) Welsh Government, Diabetes Delivery Plan for Wales 2016-2020 <http://gov.wales/topics/health/nhswales/plans/diabetes/?lang=en>
- (2) NICE: Diabetes (type 1 and type 2) in children and young people: diagnosis and management www.nice.org.uk/guidance/ng18
- (3) National Paediatric Diabetes Audit Report 2015-16 <http://www.rcpch.ac.uk/improving-child-health/quality-improvement-and-clinical-audit/national-paediatric-diabetes-audit-n-0#2015-16>
- (4) www.diabetes.org.uk/the4ts
- (5) NICE: Sepsis: recognition, diagnosis and early management www.nice.org.uk/guidance/ng51
- (6) NICE: Fever in under 5s: assessment and initial management www.nice.org.uk/guidance/cg160

This pathway was developed by the Children and Young People's South West Network, and has been adapted with permission for use in Wales by Dr. Ambika Shetty (Consultant Paediatrician) and Jon Matthias (Network Coordinator). It is approved by the Children and Young People's Wales Diabetes Network, under the auspices of the All-Wales Diabetes Implementation Group in September 2017.

www.cypdiabetesnetwork.nhs.uk/wales