

Complications of diabetes: Questions over screening



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Welcome to the *Paediatric & Adolescent Diabetes Nursing* supplement. In this edition we will be considering the issue of complication screening and audit within the paediatric and adolescent population with diabetes.

When we review the numbers of paediatric centres currently submitting data to the National Clinical Audit Support Programme (NCASP)'s National Diabetes Audit (NDA), we see that only 70 out of the 100 registered centres successfully submitted data for 2004–2005 period, and a further 92 centres are still not registered (NCASP, 2006b).

In their defence, the care process may well be occurring in the centres who have not registered or submitted data, but there is an inability to evidence this due to lack of IT and audit support. To ensure this support in your paediatric centre you will have to shout about it from the roof tops; our primary care colleagues have the situation solved and, until the advent of the electronic patient record, we will not have further investments within our organisations unless we identify it as a data-quality issue. Even submission of the mandatory data set only is better than no

submission at all (*Table 1*).

You can now submit data to the 2005/2006 audit (the audit period is from 1 January 2005 to 31 March 2006) via the Open Exeter portal. Please note the submission deadline for the 2005/2006 audit year is 30 September 2006, representing a submission period of only 6 months. This will bring the NDA more closely in line with the timings of the new General Medical Services contract Quality and Outcomes Framework data collection and allow timely data analysis, which has been gladly welcomed by many within primary care. Further details can be viewed on the NCASP website (follow the NDA link – www.icservices.nhs.uk/ncasp/pages/audit_topics/diabetes/default-new.asp [accessed 26.06.2006]).

Screening for complications

The care process we provide in paediatric and adolescent services can influence the outcomes in adulthood, especially in the development of micro- and macrovascular complications and we, as teams, can no longer hide behind the false belief that children have some magical pre-pubertal protection from complications (International Society for Pediatric and Adolescent Diabetes [ISPAD], 2000). The current screening recommendations from the National Institute for Health and Clinical Excellence guideline on type 1 diabetes in children and young people are outlined in *Table 2*.

Retinopathy

Currently, digital retinal screening programmes for the detection of diabetic retinopathy are being rolled out across the UK to fulfil the diabetes National Service Framework requirement that 80 per cent of people with diabetes will have been offered retinal screening by April 2006 and 100 per cent by the end of 2007 (Department of Health, 2003).

Within each cluster of primary care trusts, call and recall centres are currently being set up. These centres are being populated from GP databases and will contain all those aged 12 years and over. However, it is not the GPs who are responsible for the paediatric population

Table 1. Mandatory data items in the National Diabetes Audit (National Clinical Audit Support Programme, 2006a).

NHS number (ten-digit number)
Sex (1=Male, 2=Female, 0=Not known, 9=Not specified)
Year of birth (yyyy)
Year of diagnosis (yyyy)
Type of diabetes (01=Type 1, 02=Type 2, 06=MODY, 8=Other specified, 99=Not specified)
Postcode (full seven-character, current postcode)
Organisational code of service provider (five-digit alphanumeric)
Organisational code of registered GP of patient (five-digit alphanumeric)
HbA _{1c} level (person observation format 99.9)
All observations require an observation date.

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and paediatric teams need to discuss now with the relevant diabetes or retinopathy leads how they obtain these screening results, along with data regarding who has been offered screening to assist data collection. There may also be some children within your population who, due to their duration of diabetes, you wish to be screened prior to the age of 12 years. Previously, ISPAD made the following recommendation on retinopathy screening in children and young people.

- **Pre-pubertal onset of diabetes:** 5 years after onset or at age 11 years, or at puberty (whichever is earlier), and annually thereafter.
- **Pubertal onset of diabetes:** 2 years after onset, and annually thereafter (ISPAD, 2000).

Therefore, there needs to be a locally agreed mechanism on how to feed these young people into the systems adopted.

Podiatry and serology

Another screening process that we may need to feed in to is podiatry. Some teams may have the luxury of having a big enough population to enable a podiatrist to attend your clinic, but others may have to access a community-based system. Just like retinopathy screening, there is a need to create systems to ensure that data collection is complete. Having access to this data then goes towards the information required by the NDA. Richard Leigh's article starting on page 227 describes the most common questions and answers which are put forward concerning podiatry in children and young people.

The other area considered in this supplement is serology screening. As paediatric staff we are always averse to performing venepuncture on the children and often do as many investigations as possible in one go. The article by Jonathan Mimmagh and myself starting on page 222 relays the findings within our local population concerning coeliac screening and raises the question of the ethical implications of screening, especially if the families are not informed of what tests are performed. ■

Department of Health (DoH; 2003) *National Service Framework for Diabetes: Delivery Strategy*. DoH, London

International Society for Pediatric and Adolescent Diabetes (ISPAD; 2000) *Consensus Guidelines for the Management of Type 1 Diabetes in Childhood and Adolescents*. ISPAD, Norway. Available at <http://www.diabetesguidelines.com/health/dwk/pro/guidelines/ispad/ispad.asp> (accessed 26.06.06)

Table 2. Current National Institute for Health and Clinical Excellence recommendations on screening for diabetes complications in children and young people (adapted from the National Collaborating Centre for Women's and Children's Health, 2004).

Children and young people with type 1 diabetes should be offered screening for:

- coeliac disease at diagnosis and at least every 3 years thereafter until transfer to adult services
- thyroid disease at diagnosis and annually thereafter until transfer to adult services
- retinopathy annually from the age of 12 years
- microalbuminuria annually from the age of 12 years
- blood pressure annually from the age of 12 years.

Routine screening for elevated blood lipid levels and/or neurological function is not recommended for children and young people with type 1 diabetes.

Children and young people with type 1 diabetes should be offered:

- annual foot care reviews
- investigation of the state of injection sites at each clinic visit.

Children and young people with type 1 diabetes and their families should be informed that, as for other children, regular dental examinations and eye examinations (every 2 years) are recommended.

Children and young people with type 1 diabetes should have their height and weight measured and plotted on an appropriate growth chart and their body mass index calculated at each clinic visit. The purpose of measuring and plotting height and weight and calculating body mass index is to check for normal growth and/or significant changes in weight because these may reflect changing glycaemic control.

Children and young people with type 1 diabetes should have their height and weight measured in a private room.

The following complications, although rare, should be considered at clinic visits:

- juvenile cataracts
- necrobiosis lipoidica
- Addison's disease.

National Clinical Audit Support Programme (NCASP; 2006a) *National Diabetes Audit (NDA) Frequently Asked Questions*. http://www.icservices.nhs.uk/ncasp/pages/audit_topics/diabetes/diabetes_faq-new.asp#twenty (accessed 26.06.2006)

NCASP (2006b) *Paediatric unit Registrations and Submissions – final Figures May 2006*. NCASP, Leeds. Available at http://www.icservices.nhs.uk/ncasp/pages/audit_topics/diabetes/Paediatric_Units.doc (accessed 26.06.2006)

National Collaborating Centre for Women's and Children's Health (2004) *Type 1 diabetes: diagnosis and management of type 1 diabetes in children and young people*. Royal College of Obstetricians and Gynaecologists, London