Improved clinical practice but continuing service deficiencies following a regional audit of childhood diabetes mellitus

A J Drake, J H Baumer

Abstract

Aim—To assess the changes in services for children with diabetes in the south west of England between two regionwide audits performed in 1994 and 1998.

Methods—Questionnaires were sent to consultant paediatricians, specialist diabetes nurses, dietitians, and Local Diabetes Service Advisory Groups. Information was gathered on consultant and nursing caseload, clinic structure, dietetic and psychological services, glycated haemoglobin use, and screening services.

Results—In 1994 there were 21 consultant paediatricians caring for children with diabetes, only seven of whom fulfilled the British Paediatric Association definition of a specialist. By 1998 there were 14, 12 of whom fulfilled this definition. In 1994 a significant number of children were being seen in general paediatric clinics; by 1998 all centres stated that children were being seen in designated diabetes clinics. Between the two audits, despite a decrease in the average caseload of specialist diabetes nurses, nursing services in many centres remained deficient, as did dietetic and psychology services. Glycated haemoglobin use increased from 16 of 21 consultants to all consultants. In 1998 there was still patchy paediatric representation on Local Diabetes Service Advisory Groups.

Conclusions—The 1994 audit was followed by a change in clinical practice, in contrast to continuing deficiencies in resources, despite the availability of national recommendations and the widespread distribution of the audit report to those in a position of influence.

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Keywords: diabetes mellitus; audit; quality of care

The government white paper, “A first class service” envisages widespread use of national audits. What service changes can reasonably be expected from well conducted interdistrict audits?

Childhood diabetes is an important subject for regionwide audit because of the rising incidence,2,2 the frequent morbidity in early adult life, and the availability of national recommendations for good practice.13 These recommendations were strengthened by the St Vincent Declaration, resulting from a meeting in 1992 attended by health professionals, representatives of governments, and people with diabetes throughout Europe.5 A task force established by the Department of Health and the British Diabetic Association published its findings in 1995.6

A region provides an appropriate forum for undertaking an audit because of the relatively small numbers of clinicians and patients in any one district, and the ease of attending regional meetings. In studies involving groups of hospitals, differences in outcome may be related to variation in patterns of clinical care provided,7 recognising the large fluctuations that may occur in any one hospital in different years.

An audit of childhood diabetes services in 1994 in the south western region8 showed that the 61% of children who were looked after by paediatricians with a caseload of more than 40 children compared favourably on a number of measures of care received. The number of clinicians caring for children with diabetes had not changed from six years previously.9

In 1998, a reaudit of childhood diabetes services was undertaken, in order to establish what improvements in care had occurred.

Methods

The audit standards and outcomes used in the 1994 audit were based on national recommendations, and were agreed with the professionals providing care through a series of regional meetings. Information was collected simultaneously on the children with diabetes and the services at each hospital. A detailed analysis of the children with diabetes and their services was presented to all involved clinicians and then distributed as a written report to all Directors of Public Health, Clinical Directors, and Chief Executives of Trusts in March 1996 in such a way that their own service was identifiable. Specific recommendations to improve services and to rationalise consultant care consistent with national recommendations were included.

In 1998, following a regional meeting of clinicians, a further questionnaire was sent out to all consultant paediatricians who were thought to have been caring for children with diabetes in the south west in the previous four years. Separate questionnaires were sent to all diabetes nurses, dietitians, and Local Diabetes Service Advisory Groups.

Information was collected on:

- Consultant caseload
- Availability of designated diabetic clinics for both children and adolescents
- Numbers of specialist diabetes nurses and their caseloads
- Availability of the services of dietitians and psychologists

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were significant deficiencies in their local

who replied, four of five recognised that there

Local Diabetes Service Advisory Groups. Of

the two audits. Six consultants in 1998 stated

a further four centres.

in two in 1998; children were seen within four

approach. A psychologist was able to attend

in the year in four centres. Between 1994 and

centre had no diabetes nurse in 1994 and

excess of 100 children from nine to four. One

numbers of centres with nursing caseload in

equivalents; there was a decrease in average

specialist diabetes nurses in the 12 centres

children in designated clinics.

In 1994, there were 21 paediatricians caring

children with diabetes of whom only seven

fulfilled the definition of a specialist. By 1998,

there were 14 consultants caring for children

with diabetes, 12 of whom fulfilled the

definition of a specialist. The two non-

specialist consultants both had a very small

caseload. Neither was accepting new referrals

of children with diabetes and one was actively

transferring care to another consultant.

In 1994, 100 of the 812 children studied

were seen in a general paediatric clinic and

there were only five centres in which all

children were seen in designated diabetes clin-

ics. In 1998, all consultants who returned their

questionnaires stated that they were seeing

children in designated clinics.

Between 1994 and 1998, the total number of

specialist diabetes nurses in the 12 centres

had increased from 7.4 to 10.7 whole time

equivalents; there was a decrease in average

caseload from 129 to 107 children per whole

time equivalent nurse and a reduction in

numbers of centres with nursing caseload in

excess of 100 children from nine to four. One

centre had no diabetes nurse in 1994 and

1998.

Although a dietitian was able to attend all

children’s clinics in seven centres, they were

only able to attend all adolescent clinics in two

centres and only saw all children at least once

in the year in four centres. Between 1994 and

1998, the main dietary advice given had

changed from exchanges to a healthy eating

approach. A psychologist was able to attend

clinic regularly in only one centre in 1994 and

in two in 1998; children were seen within four

weeks of referral to the mental health service in

a further four centres.

Glycated haemoglobin use increased from

16 of 21 consultants to all consultants between

the two audits. Six consultants in 1998 stated

that they had paediatric representation on their

Local Diabetes Service Advisory Groups. Of

those Local Diabetes Service Advisory Groups

who replied, four of five recognised that there

were significant deficiencies in their local
diabetes services for children and adolescents,
and three had considered the 1994 recommen-
dations.

Discussion

The reaudit has shown significant changes in
the way care is provided for children with
diabetes in the south west in the four years
between two audits, particularly with respect to
the concentration of care into the hands of
smaller numbers of consultants, all but two of
whom now fulfil the British Paediatric Associa-
tion criteria as specialists.

Would the considerable reduction in num-
bers of consultants caring for children with
diabetes have occurred without the audit? The
lack of change in numbers of consultants
caring for children between 1988 and 1994
would suggest not.

It is likely that the reduction in numbers of
consultants also contributed to the more
universal adoption of diabetic clinics. This
should facilitate a multiprofessional approach
to diabetes management. However, the lack of
universal availability of dietetic advice in all but
four centres was disappointing. This contrasts
with the change in the availability of
psychological support. Likewise, the ready availability of psychology
support was only achieved in six centres,
despite the suggestion that this has appreciable
benefits for both patients and the diabetes

team.

An increase in the number of specialist nurs-
ing staff was seen but the national recommen-
dation of a nursing caseload of 70 to 100 chil-
dren per whole time equivalent was still
achieved in only seven centres. Although in
1994 nursing caseload seemed to have little
association with most outcomes, the fact that
the diabetes nurses were overstretched made it
impossible to establish the consequences of
smaller caseloads.

There is therefore a disparity between the
changes in clinical practice, and the continuing
deficiencies in the resources available for chil-
dren’s diabetes care. The involvement of all rel-
levant professionals from the outset, and the evi-
dence from the audit of improved care
associated with larger consultant caseload were
probably important factors in the achievement
of change. It is disappointing that despite the
audit report being circulated to all Chief Execu-
tives of involved Trusts and Directors of Public
Health, recommendations requiring increased
resources were implemented patchily, and paed-
iatric representation on Local Diabetes Service
Advisory Groups was not universal despite this
being a recommendation of the audit.

In conclusion, the 1994 audit was followed
by a change in clinical practice, in contrast to
continuing deficiencies in resources, despite
the availability of national recommendations
and the widespread distribution of the audit
report to those in a position of influence. It
remains to be seen to what extent the develop-
ment of clinical governance will have a positive
effect on rectifying service deficiencies identi-
fied through interhospital audit.


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