A nurse-led ADHD service for children and adolescents

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Evidence-based nursing guidelines were developed on the management and treatment of attention deficit hyperactivity disorder (ADHD) in Forth Valley. After an audit revealed that adherence to the guidelines was generally good, except in terms of providing individualised school-based programmes for children with ADHD, a service was developed to work closely with schools and families to improve this area of care.

Nursing guidelines for the assessment and treatment of attention deficit hyperactivity disorder (ADHD) were developed in Forth Valley (Brown, 2003). In addition to spreading the workload of ADHD, the aims of these guidelines included:

- Raising the profile of senior nurses and utilising their expertise in this area;
- Improving service provision for children with ADHD.
- Forth Valley’s Child and Adolescent Mental Health Services (CAMHS) were keen to assess and improve practice in this area, particularly since the number of referrals for suspected ADHD was increasing. An audit of Forth Valley’s child and adolescent guidelines was therefore proposed. The service for the assessment and treatment of ADHD had recently been redesigned in line with a draft copy of the guidelines (Scottish Intercollegiate Guidelines Network, 2000), so the audit would provide a valuable evaluation of the new system. This article reports on that audit and a new service set up as a result of its findings.

The guidelines are divided into four main sections:

- Definitions and concepts;
- Assessment;
- Non-pharmacological therapy;
- Pharmacological therapy.

Individual guidelines within each section are given one of three levels of recommendation, depending on the type of evidence used to formulate them – from grade A for evidence from randomised controlled trials to grade C for expert opinion.

The audit

The audit involved an analysis of a sample of the case notes of children or young people diagnosed with ADHD from 1 May 2001 to 30 April 2002. Case notes should provide a comprehensive record of the case, so it was felt that these should provide sufficient information to analyse the service.

The audit tool consisted of an 85-question checklist based on the individual guidelines, from which information in the case notes could be systematically gathered. The questions required a response of ‘yes’, ‘no’ or ‘not applicable’, and in some cases more than one applied to a particular guideline. Alongside the completion of the checklist, notes were written regarding any extra practices referred to in the case notes. Thirteen cases were audited in a pilot run to enhance accuracy in reading the notes and completing the checklists. These were then re-audited as part of the total sample of 20 cases.

Results

A total of 52 individual guidelines had been made by SIGN and across the 20 cases audited, 72 per cent were met overall:

- Fifty-four per cent were fully met in all 20 cases;
- Forty-two per cent were met in some, but not all cases;
- Four per cent were not met by any of the 20 cases.

Although meeting 72 per cent of the individual guidelines over 20 cases shows good conformity, the service did not perform well in relation to the guideline on individualised education programmes. Three questions on the checklist related to this guideline, which has a grade ‘A’ recommendation.

The child or young person received an individualised school intervention programme (ISIP) in only six cases, all of which included behavioural interventions. Five included academic interventions and five had educational psychology input. In light of the service’s relatively poor performance in this area, a literature search was carried out to review the role of ISIPs.

School-based interventions

It is recommended that children and young people with ADHD have ISIPs. The increasing numbers of ADHD diagnoses has intensified the need for educators to understand the disorder, ways of managing the behaviour of children

BOX 1. EDUCATIONAL PROGRAMMES FOR SCHOOLCHILDREN WHO HAVE ADHD

- Behavioural strategies
- Environmental modifications
- Adaptations to curriculum content
- Modifications in the delivery of the curriculum
- Sensory modification strategies
with ADHD in the classroom, and strategies to enhance their performance at school. However, the process of identifying specific educational programmes for children with ADHD is problematic for a number of reasons. For example, ADHD has different levels of severity and different symptoms, while a diagnosis of ADHD often coexists with other conditions, such as conduct, anxiety or depressive disorders, or learning disabilities (Green et al, 1999).

Mulligan (2001) described and evaluated five types of educational programmes for school pupils with ADHD (Box 1). Behavioural strategies are the most common type of intervention used in the classroom. They are typically used to control disruptive behaviour and help reinforce more desirable behaviour (Ambramowitz et al, 1997). This involves employing techniques such as positive or negative reinforcement in order to ameliorate or reduce disruptive behaviour or reinforce more desirable behaviour.

Environmental modifications can reduce distractions within the classroom (Mulligan, 2001). They include placing children with ADHD near the front of the class, where they can focus more easily on the teacher, and putting them beside good peer role models and away from distracting windows.

Lichter (1993) also recommends a designated quiet area of the classroom where children with ADHD can work quietly, segregated from the rest of the class. However, this area should be used cautiously by teachers as the child or young person may feel different to the rest of the class or see segregation as a punishment.

Curriculum modification is another common approach. Zentall (1993) comments that children with ADHD typically have a lower boredom threshold than others and suggests that simple strategies such as adding colour to spelling words or allowing them to study more of the subject of particular interest to them may help improve attention.

Work could be broken into smaller stages or shortened to match the child’s ability. However, with average class sizes of 30 pupils, teachers cannot take on these tasks themselves, so schools would require additional resources such as extra teachers or classroom assistants to implement such strategies. With a 1–5 per cent prevalence of ADHD (Taylor et al, 1991), this could be extremely costly.

Sensory-motor strategies, which are believed to increase a child’s level of arousal and attention, include chewing gum, jumping periodically on a trampoline or sitting on a special seat cushion that allows for more movement (Kimball, 1999).

Physical activities such as moving desks or tables, carrying heavy books or running errands may also keep children with ADHD calm and/or more organised. However, while these strategies could be helpful for children with ADHD, their potential impact on the rest of the class should be taken into account.

Individualised programmes

Before implementing ISIPs, teachers should have a good understanding of ADHD. Barkley (1998) recommends that they should be made aware that:

- ADHD is a biologically-based educational disability that can be treated, but not cured;
- ADHD is not the result of a lack of skill or knowledge, but an inability to sustain attention, motivation and behaviour, particularly if consequences and rewards are delayed, weak or absent and/or there is a lack of structure for academic tasks;
- It is more difficult for children with ADHD to do the same academic work and exhibit the expected social behaviours of their peers;
- The most effective interventions for improving academic performance of children with ADHD are applied within the school setting.

As a result of the literature review, the following recommendations were made:

- All children in Forth Valley with ADHD should have an ISIP;
- There should be ongoing close liaison between CAMHS and schools during assessment and after diagnosis;
- Once a diagnosis of ADHD has been made, a case discussion should be arranged at the school to discuss assessment and treatment, and to draft the ISIP.

A new ADHD service

Taking the SIGN recommendations on ISIPs seriously – and those of Mulligan (2001) – CAMHS in Forth Valley made a bid to the Primary Care Development Fund for resources to set up a new service. The bid, which was successful, placed great emphasis on school-based interventions. It was to be led by a full-time mental health practitioner (a senior nurse), supported by a full-time psychology assistant and a half-time specialist teacher. The service, which was called the Changing Lanes Project, opened for business in July 2003.

The main remit is the assessment and treatment of children and young people referred with possible ADHD, offering clinic, home and school-based interventions. Referrals follow a set of criteria (Box 2).

Parents or guardians of referred children are asked permission for staff to liaise directly with the child’s school, although they have the option of being seen at the clinic beforehand. If families do not respond to the clinic within 21 days it is assumed they no longer want their child assessed, and the case is closed.
Assessment process
A comprehensive assessment process has been developed. Once we have permission to contact the child’s school, we write to the head teacher and class teacher, asking them to complete a school assessment pro forma and a teacher rating scale, and to list the child’s strengths and difficulties.

The family is given an appointment to meet with the mental health practitioner and/or psychology assistant, where in addition a detailed assessment of the child will be undertaken.

If specifically indicated, the specialist teacher or psychology assistant will arrange school observations, which include 30-minute classroom observations and 15-minute playground and/or canteen observations. Again, when indicated, home observations can also be carried out.

At the end of the assessment process the following steps are available:
- A diagnosis of ADHD will be confirmed or ruled out;
- A second opinion from a consultant psychiatrist will be sought;
- For complex cases, a referral can be made to the active behaviour clinic.

If there is no indication that the child has ADHD, the mental health practitioner will have a further meeting with the child and family to give them feedback. A further preliminary assessment will be undertaken in order to reach an initial formulation of the child’s/family’s difficulties, after which the mental health practitioner can refer them to a parenting programme, psychology or psychiatry services, other agencies, or close the case.

Treatment interventions
A range of treatment interventions can be initiated. If medication is indicated, with the family’s agreement an appointment is arranged with the consultant psychiatrist. The project can refer parents to a parenting programme, contribute to, help implement, monitor and review ISIPs and provide home liaison on education and behaviour management. It also runs a support group for teenagers with ADHD.

Children and young people who come through the project and are given a diagnosis of ADHD have their cases reviewed annually.

First-year audit
An audit of Changing Lanes was undertaken at the end of its first year of operation to assess its effectiveness. The service had received 74 referrals, most of which (56) came from GPs. Of the 35 fully assessed at the time of the audit, 24 were diagnosed with ADHD. The age range of diagnosed children was three to fourteen years (Fig 1), and 23 were male. Thirteen had a comorbid diagnosis such as autistic spectrum disorder, speech and language disorder or developmental delay.

The audit found that 59 of the 74 cases referred were originally referred to psychology or psychiatry services. Fourteen of these were on the psychology waiting list when accepted, while the rest were referred on from psychology or psychiatry. On average, these children were seen 19 weeks sooner than they would have been if they had remained on the waiting list. This demonstrates that the project is reducing the workload of psychology and psychiatry, and enabling children to receive assessment earlier.

Satisfaction questionnaires are sent to parents at the end of the assessment process and the 17 returned at the time of the audit were extremely positive. Parents were given nine statements about the quality of service and asked whether they were certainly true, partly true or not true (there was also a ‘don’t know’ option). All statements received 12–15 positive responses.

Parents were also given the opportunity to comment on what they thought was good about their care, whether anything about the service needs improving, or to make any other comments.

A total of 25 positive comments were received, compared with five that were negative. A satisfaction survey of referral agencies is planned, while service users over the age of nine have been sent questionnaires. At the time of the audit too few of these had been returned for analysis.

Conclusion
The most innovative part of this project is its involvement with school-based interventions for children and young people with ADHD. It aims to help improve behaviour and academic performance within school through developing ISIPs tailored to individual children’s educational needs.

The initial funding was for two years, but we hope to be able to demonstrate that the project is both clinically effective and cost-effective enough to attract continued funding and to be expanded. Future plans include setting up a website and support groups for families and teenagers, and developing links with the child learning disability and paediatrics services.

![Figure 1: Age of Children on Referral](image-url)