

rights, in practice the stated provision to meet the child's special needs is often expressed in very general terms. One district general manager described this as "a professionally and ethically unacceptable situation, with which, however, we are forced to live."

Successfully implementing the arrangements for children with special educational needs depends on optimal resources, liaison, and communication. There are major problems in many educational services, which are not eased by a widespread lack of common boundaries between health and education authorities, poorly integrated health services for children, and the low baseline from which many community health services have been operating. Recent cuts have exacerbated matters further.

The conclusion must be that many children with special needs are not having these needs met. More resources,

money, and staff are needed. NAHA wants the Department of Education and Science and the Department of Health to respond to its report and to set out a timetable for action to ensure that children with special needs receive the help that is theirs by right.

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Idiopathic scoliosis

Early onset scoliosis may be serious, but the benefits of screening in later life are unproved

Idiopathic scoliosis may be of early or late onset, a difference crucial to the risk of later cardiopulmonary problems.¹ Curves of early onset, present before the age of 5, can distort the chest and thus interfere with the critically important process of pulmonary alveolar reduplication.² By contrast, late onset idiopathic scoliosis is free of this complication: patients have only deformity.³ Early onset scoliosis is uncommon, and more than 90% of cases resolve spontaneously. Only a few patients with scoliosis are therefore at risk of cardiopulmonary problems.

Early onset scoliosis has been attributed to how babies are positioned in their cots.⁴ If babies are laid on their side then pressure moulding may produce plagiocephaly, plagiothorax, plagioplevy (plagio=oblique), a relatively adducted hip, a wry neck, and a bat ear. Where babies are laid prone in their cots, as in the United States, the condition is virtually unknown. Normotonic, normally developing babies of normal birth weight resist further buckling of the spine and make up most of those whose scoliosis resolves; hypotonic, floppy babies of low birth weight with low neurological development scores are those most likely to have progressive disease.⁵ Unlike late onset scoliosis the early onset variety is preventable and can be treated conservatively. All babies should be laid prone, and when this advice has been followed the incidence of early onset scoliosis has fallen substantially.⁴ Any baby with asymmetric body topography should be referred promptly to a specialist in scoliosis. Delays in referral are occurring at present, and doctors (particularly orthopaedic surgeons) rather than parents are mainly responsible.⁶ Patients whose scoliosis is progressing, who have bigger, stiffer, and more rotated deformities, need immediate cast treatment.⁵ Curves that are progressing seriously can be controlled by applying a series of casts under light anaesthesia, the whole process taking two or three years. For the very few who progress inexorably spinal fusion should be performed despite their young age. As these deformities are lordoscolioses posterior fusion alone is insufficient: the spine must be fused both front and back.⁷

Late onset idiopathic scoliosis is neither preventable nor can it be treated conservatively. Various contraptions have been recommended for treatment since the time of Hippocrates, but only bracing has been enthusiastically

endorsed. Its supporters have produced no evidence, however, that bracing changes the clinical course of scoliosis, and one small controlled study has shown no benefit from orthoses.⁸ Whether these devices work in theory may not matter—patients seldom wear them anyway. Houghton *et al* fitted undetectable compliance meters to their braces and despite adequate counselling about wearing braces from medical, nursing, and physiotherapy staff "reliable school children" wore them only for a small fraction of the recommended time.⁹ Electrical stimulation is even less effective.¹⁰

Idiopathic scoliosis fulfils none of the criteria for clinical screening,^{11,12} the two main deficiencies being no clear understanding of the natural course of the condition and no effective non-operative treatment. Not surprisingly, therefore, screening has done little more than uncover many untreatable cases: claims of the benefits of screening are quite unfounded.^{13,14} Mercifully, most cases detected by screening do not progress, and epidemiological surveys, for all the children they have included, have shed little light on this gloomy subject.¹⁵

If the deformity is unacceptable then the object of treatment is to restore and maintain acceptability for the remainder of growth. Only surgery can do this: spinal instrumentation is needed to produce correction, and spinal fusion to maintain it. During the 1960s and 'seventies posterior Harrington instrumentation was the accepted method of correction.¹⁶ Though some degree of improvement was possible in the coronal plane, the rotational prominence that was the chief deforming factor remained unchanged.^{17,18} Furthermore, when this instrumentation was used for curves below the thoracic region it tended to produce an ugly, flat back deformity; with only one or two mobile lower lumbar discs left to take the load, patients often experienced low back pain in later life.¹⁹

In the 1980s increasing attention has been focused on the sagittal plane.²⁰ If the thoracic kyphosis is restored with instrumentation applied segmentally then thoracic curves can be successfully derotated, reducing the presenting rib hump.²¹ The risk of postoperative progression with growth is also reduced by this approach. Anterior instrumentation and fusion have become more popular for curves below the thoracic region, though some flattening of the lumbar

lordosis is unavoidable.²² Although the necessary fusion is substantially shorter than that required in posterior surgery, the number of lumbar segments allowing motion is still reduced, and the long term future of spines treated in this way is still unclear.

Surgical treatment is a question of "risks versus rewards,"²⁷ and all procedures risk damaging the spinal cord. Moreover, the deformity is the patient's and not the surgeon's, and the patient's opinion about what is acceptable is much more important than that of the surgeon. What surgeons should do is to counsel, as far as they can, about the risks of progression, expected degree of correction, and risks of complications of treatment—presenting the risks and rewards clearly. In this way the decision taken is more likely to be the right one for the patient.

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New technology in medical libraries

Aiding literature searches and providing new services

Medical librarians now have their jargon and nowhere more so than with the new technology—where we have ADONIS, CATS, SilverPlatter, and CD-ROMs. Though expensive, these powerful aids provide librarians and library users with more comprehensive, effective, and relevant information services and teaching programmes than we have had in the past.

Any discussions of the new technology must start with the compact disk. Just as in music, where audio compact discs are threatening the existence of the record and the cassette, so in data bases compact disk read only memory (CD-ROM) is trespassing on the territory of on line searching. Several companies, among them SilverPlatter, are now producing databases on compact disks. The Medline CD-ROM, for example, contains citations from *Index Medicus*, the *Index to Dental Literature*, and the *International Nursing Index*. Disks are issued regularly, and the contents become cumulative. References can be retrieved by using terms in the thesaurus or keywords, and abstracts of some articles are available. Information can be printed from the disk or downloaded on to floppy disks for use on individual microcomputers, although the copyright restrictions on this activity remain to be solved. Many library users, after having been trained by librarians, find it convenient to do their own searches without the inhibition of on line charges. Certainly the disks have to be paid for, but the more people who use the particular system the cheaper it becomes. A CD-ROM player, a microcomputer, and a printer are all that are needed to use the system.

Nevertheless, on line searching still has its place in information retrieval. For instance, one search can entail using several databases covering many years. Until the higher capacity compact disks and multidisk drive players are perfected such a search using compact disks would be cumbersome. Moreover, an on line service can be used

through an internal network system of the type now being installed in many hospitals, though it should not be too long before compact disks can be similarly accessed.

Article Delivery over On line Information Systems (ADONIS), another compact disk system, is undergoing trials by the British Library in association with other libraries. At the British Library the contents of copies from 1987 and 1988 of 219 biomedical journals published by 10 publishers are indexed, and each article is processed on to a disk that holds 7000 pages of text. The disks are circulated weekly to the participating libraries, and individual articles can be printed on demand. Unlike a journal issue, therefore, users receive only those articles that they require, but readers will not be able to browse through journals as easily, and serendipity may become rare. The programme relies on the support of publishers, who will be selling individual articles instead of journal subscriptions.

Current Awareness Topics Services (CATS), another British Library venture, covers complementary medicine, occupational therapy, physiotherapy, rehabilitation, and terminal care. Databases include citations from many sources, and a printed version is published monthly. Photocopies of material listed can be supplied by the British Library, whose medical information service staff will undertake computer searches on the databases.

Compact Library AIDS includes on compact disk references from Medline, an electronic textbook, and several journals concerned with AIDS.¹ Integrating bibliographical references with text, the system is comprehensive and easy to use. It will surely be used for coverage of other topics.

Interactive videodisks and computer assisted learning packages are two other additions to the new facilities in libraries. The videodisks combine the attributes of the more traditional audiovisual media—slides, moving pictures, and still and animated diagrams—with sound. One side of a disk